

THE
**CANADIAN
HOSPITAL**²

**OFFICIAL JOURNAL
CANADIAN HOSPITAL COUNCIL**

UNIVERSITY OF TORONTO **FEBRUARY, 1947**

HOW CAN SMALLER HOSPITALS PROVIDE NEEDED LINENS FOR MORE PATIENTS?

● The 25 to 75-bed hospital has the same problem as large hospitals—to provide, from the available supply, more clean linens for more patients.

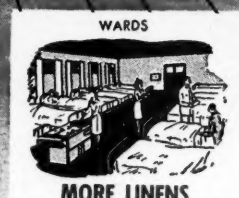
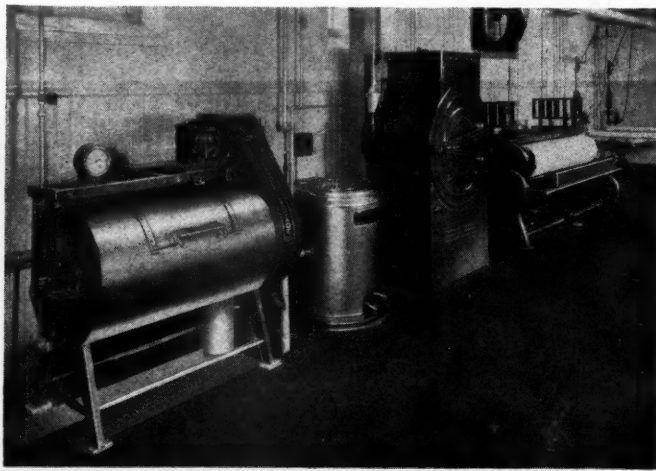
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Is Medication Called For in the Correction of Constipation?

*New investigation emphasizes
dietary requirements in treatment of
physiologic constipation*

IN a recent article published in the American Journal of Digestive Diseases* the causes of constipation were reviewed, and a simple dietary procedure recommended for patients lacking in adequate cellulosic residues.

Doctors were reminded that patients suffering from constipation as a rule indulge in self-treatment, and it is therefore important to establish and correct the physiology in each patient over a 24-hour period.

PROCEDURE RECOMMENDED

Outline a diet in keeping with basal requirements, providing the essentials needed for *residue* and *nutriment*.

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CONCLUSION

If this simple procedure does not correct constipation, particularly in individuals where a substantial amount of cellulose is lacking in the diet—then medication is called for.

*Management of Chronic Constipation:
by Michael H. Streicher, M.D.

The Kellogg Company, makers of Kellogg's All-Bran, will be pleased to send you a reprint of the article from which this report has been summarized. Please use the coupon.

PLEASE SEND me a reprint of Dr. Streicher's article as published in the American Journal of Digestive Diseases.

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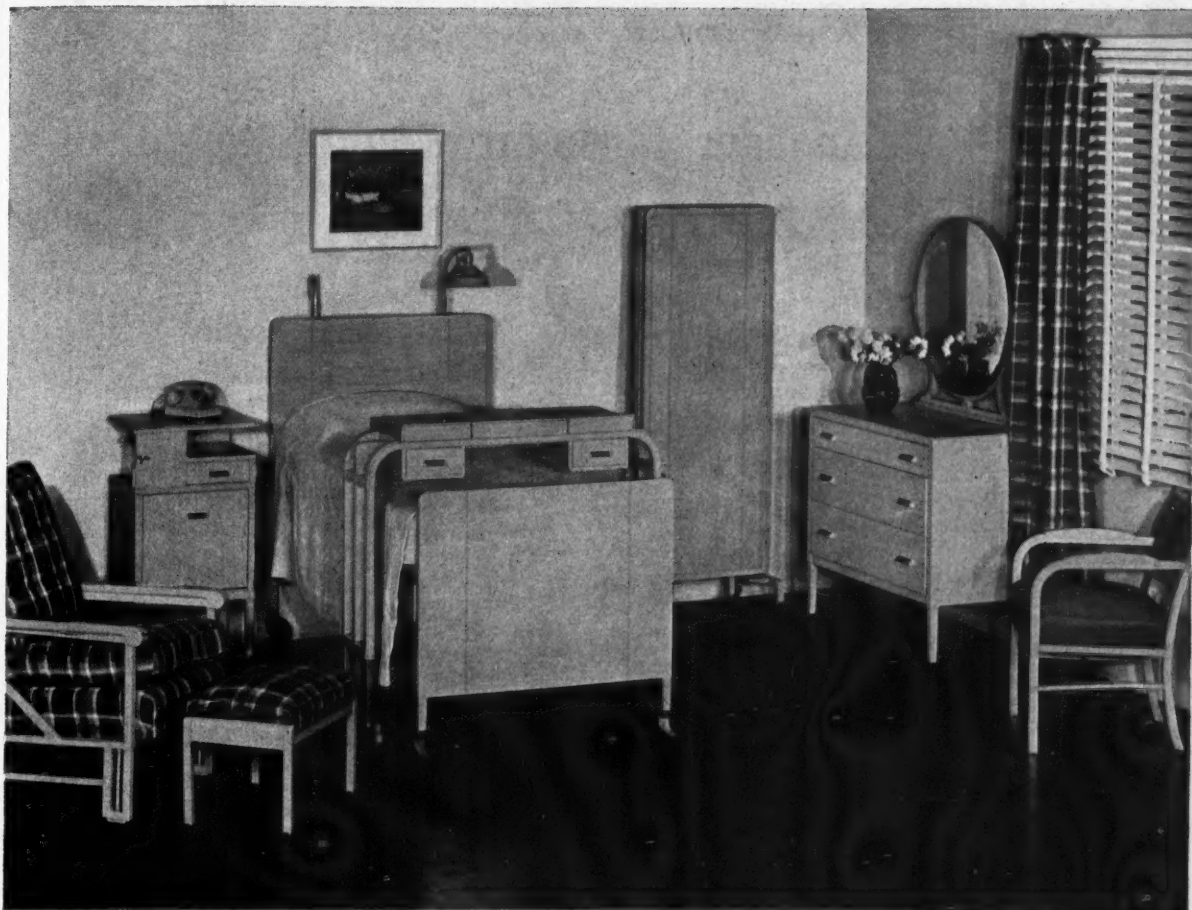
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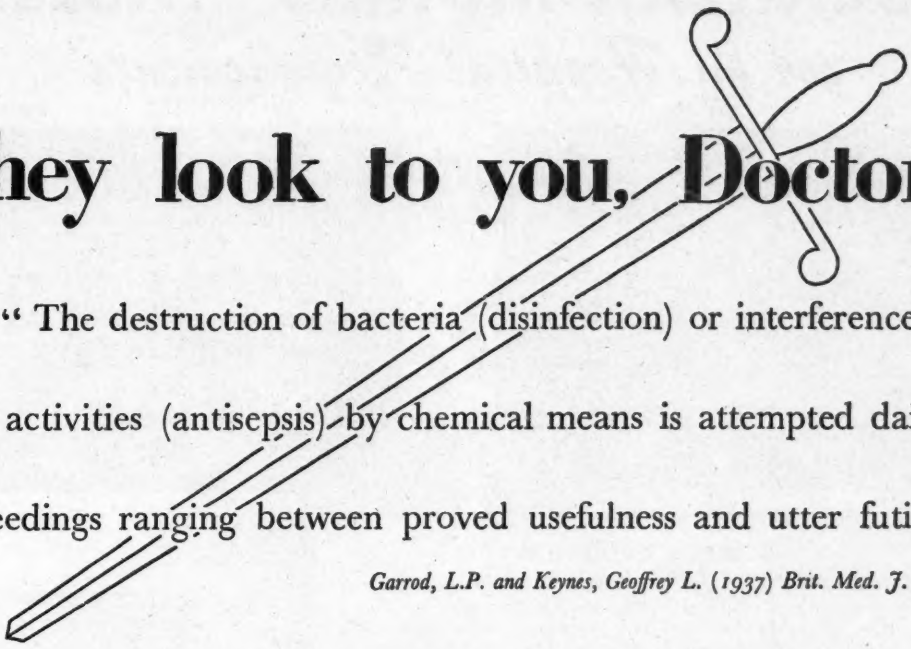
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“The destruction of bacteria (disinfection) or interference with their activities (antisepsis) by chemical means is attempted daily in proceedings ranging between proved usefulness and utter futility.”

Garrod, L.P. and Keynes, Geoffrey L. (1937) *Brit. Med. J.* 2, 1233.

IF SO FORTHRIGHT a reminder as this should have been addressed to the medical profession itself, how much more does the unskilled user of antiseptics—the ordinary householder—stand in need of guidance!

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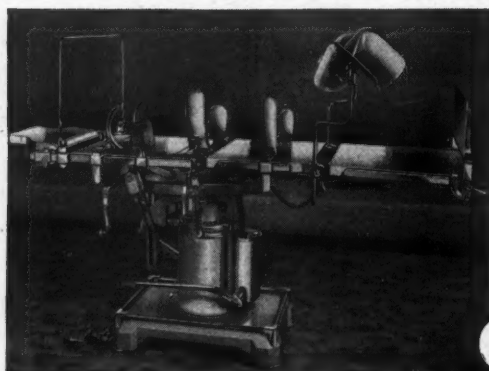
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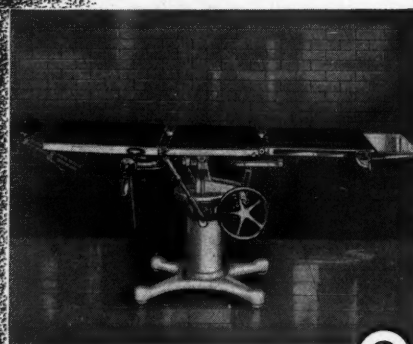
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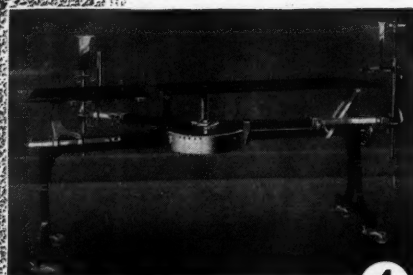
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By C. A. E.

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—*Electromet Review.*

* * * *

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* * * *

A Sultan at odds with his harem,
Thought of a way he could scarem.
He caught him a mouse,
Set it loose in the house;
Thus starting the first harem-scarem.

(Continued on page 16)

NO. 8 in Schenley Laboratories' continuing
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¹ Short, J. J.: U. S. Nav. M. Bull. 43: 974 (Nov.) 1944;

² Kay, E. B.: Arch. Int. Med. 76: 93 (Aug.) 1945.

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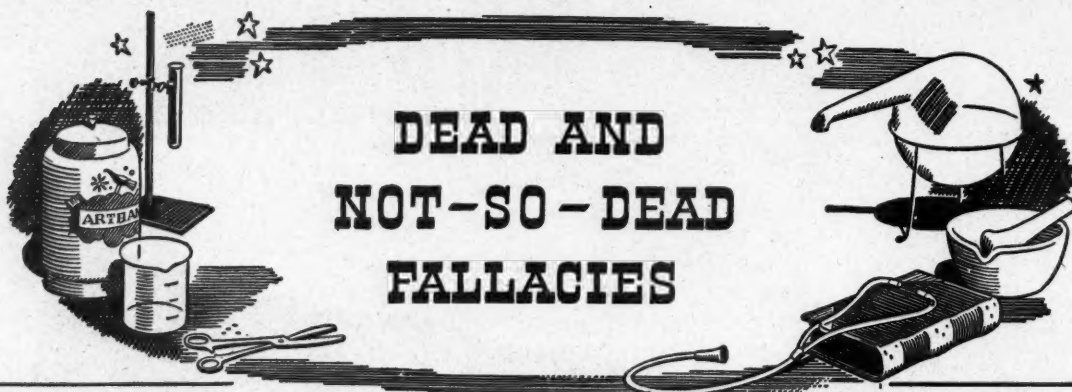
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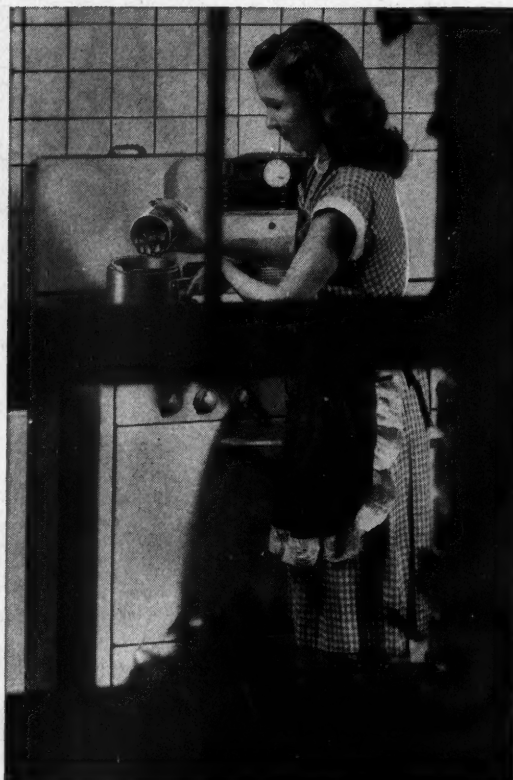
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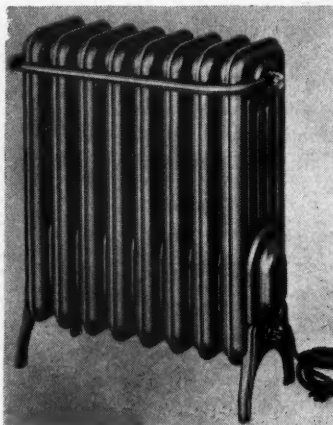
The floors are resilient J-M Asphalt Tile. Manufactured in small units in a wide variety of plain and marbleized colors, new units can be easily inserted to permit alteration, or expansion of floor areas.

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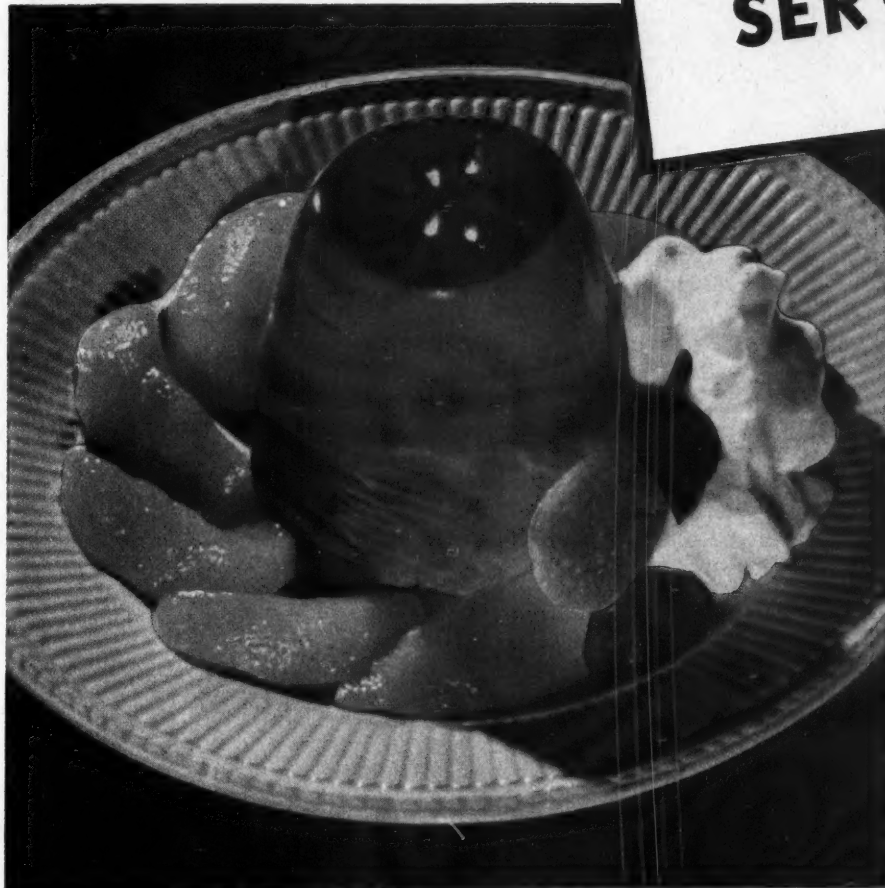
Already in mass production, the radiator should be ideal in cool weather for sick rooms, nurseries, and other small rooms.

The radiator never gets so hot that accidental contact will cause burns. The reason is that it gets rid of the heat produced as fast as it generates it. In addition to radiating heat, it draws cold air off the floor, passes it through the radiator and expels

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(Concluded on page 20)

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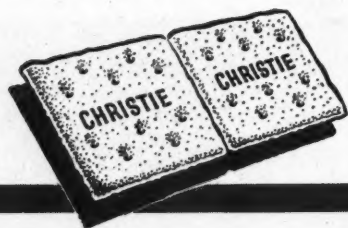
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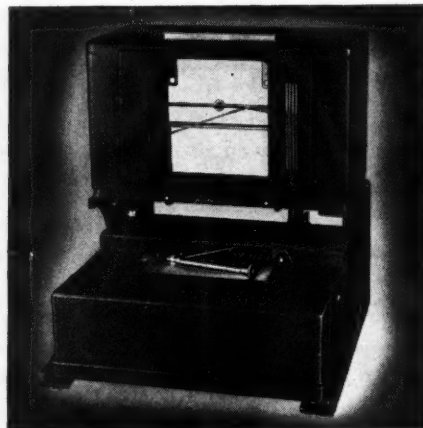
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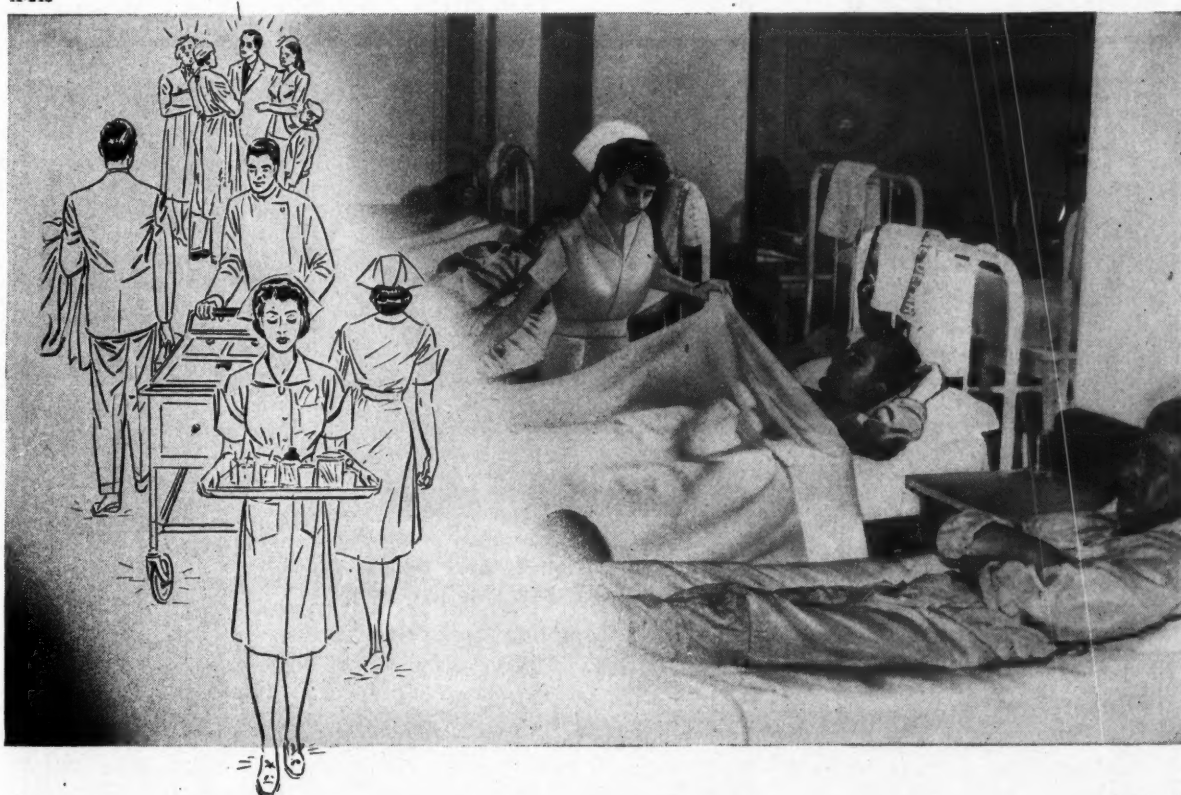
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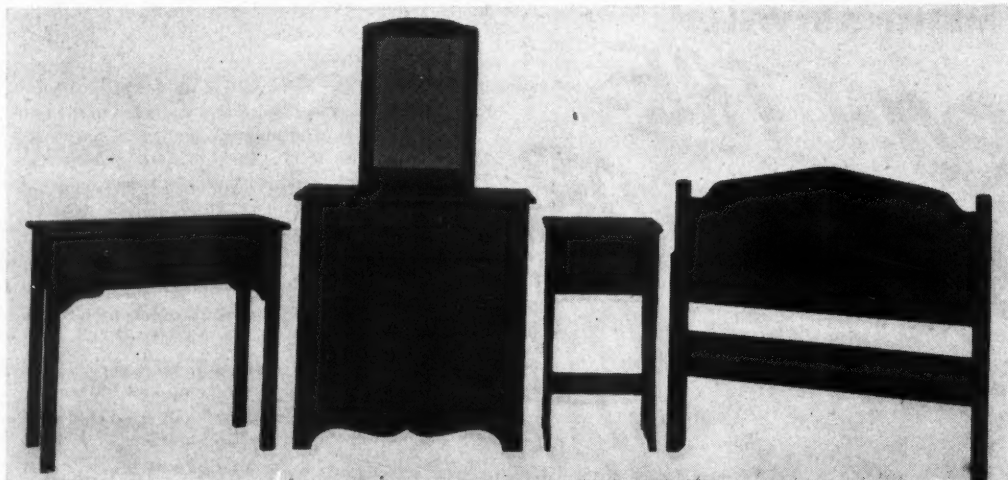
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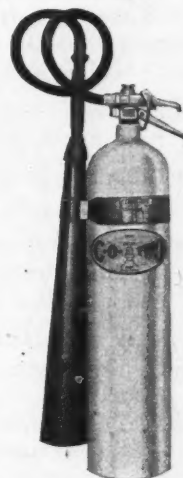
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Harvey Agnew, M.D., Editor

Toronto, February, 1947

Vol. 24



CANADIAN HOSPITAL

No. 2

Lotteries Again

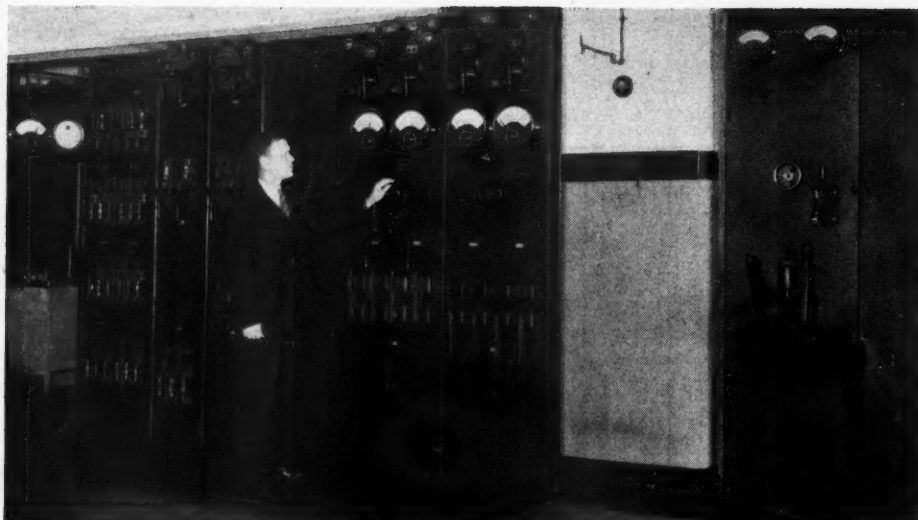
AT the time of writing a movement is on foot in Vancouver to legalize the holding of sweepstakes for hospitals. The agitation is being aided by the sale in that city of tickets for the state lottery of Queensland, Australia. The number of turkey raffles at Christmas is said to indicate the public attitude and the legality of church raffles with prizes under the value of fifty dollars gives some support to a demand on the part of some people that lotteries on a larger scale be recognized.

One could argue either way on this question. Certainly it is hard to see good money leaving the country to swell the funds of lotteries elsewhere; moreover taxation and necessary appeals to the generous might be reduced if funds could be raised by other means. It would be an easy way, and one that would be welcomed rather than resisted by those affected, to have the major contribution come from those who, generally speaking, make the least contribution to tax funds or to philanthropy, yet make the heaviest demands upon the free services of hospitals. But this is only part of the picture.

Lotteries have been a welcome benefit to the recipients in Eire and in Australia because *they have had the whole English-speaking world to draw from*. But suppose all other countries take up lotteries! Then our Canadian money would go only in small part to the British Colum-

bia lottery, for we would pour money into the United States, Great Britain, India, Newfoundland, Jamaica and every other country. British Columbia money, if the other provinces had separate lotteries, would be diverted into the other provincial schemes. In the long run each country or province would only have approximately the equivalent of what it would raise locally and of this, allowing for the necessarily huge prizes and the expenses, raised by the competition of other plans, the hospitals would get but, say, 15 to 30 per cent. Could a more expensive way of raising the millions needed for hospital care be devised?

Only if British Columbia could be assured that no other province would follow suit, that the United States and Great Britain would keep out of the field and all other countries do likewise, could one feel that lotteries are justified economically, altogether apart from the question of ethics or the effect upon the moral fibre of the nation. Even then we would need to bear in mind that lotteries in Ireland killed philanthropy insofar as hospitals were concerned—and it is a serious matter to destroy a spirit of personal and community responsibility that has taken many generations to build up. We understand that the Eire hospitals found themselves in a bad way when the War stopped the flow of foreign money upon which they were dependent.



A Hospital Engineer *Looks at His JOB*

ENGINEERING is the practical application of physics and mathematics. To apply these effectively the apprenticeship period must be long and varied. This period is credited to the engineer as "experience", for which there is no substitute. In accumulating experience the emphasis is placed on doing the most with the least. That is why an engineer must have long and varied experience to be of value in an institution such as a hospital.

First priority in hospital consideration is *uninterrupted service*. This in turn calls for flexibility of almost all service units. These services are primarily:

- (1) The generation and distribution of steam;
- (2) The generation and distribution of electricity;

Address given at Manitoba Institute on Administration, November, 1946.

N. MacLeod,
Chief Engineer,
Winnipeg General Hospital

- (3) The distribution of hot and cold water, air and gas; and
- (4) Incorporating a high safety factor ratio.

Steam

In the generation of steam, the factors that control efficiency are the type of boiler, the type of coal available, the method of firing the coal, the extent of combustion control auxiliaries and instruments, and the feedwater preparations.

There is no one particular type of boiler installation that can cover all these requirements universally; that is, a boiler setting fitted with a particular type of stoker to burn any kind of fuel economically. Therefore, a boiler has to be chosen that (1) has ample capacity for maximum loads, (2) can be accommodated in

the space available, (3) has furnace and passage volumes proportioned to consume economically the lowest priced coal available (in quantity), (4) can be handled satisfactorily by a suitable type of automatically-controlled stoker and (5) has the combustion effect always in plain view of the fireman through recording instruments. The latter has proven to be of as great value as any other single unit, as it creates a spirit of enthusiasm and competition among the operators and gives the chief engineer a record of conditions during the entire twenty-four hours.

The feedwater entering the boiler should be heated and de-aerated for the dual purpose of relieving stresses and disposing of the dissolved gases which are credited with causing internal corrosion. Such other auxiliaries as air preheaters, econom-

Above: Electrical Panel Board provides flexibility of control, A.C.—D.C. to all hospital departments.

izers, continuous blowdown and ash conveyors are contingent on local conditions.

Generally speaking, engineers are poor salesmen. They may request equipment necessary to promote and maintain efficiency, but lack "high pressure" ability to emphasize the great importance of their request, with the result that their suggestions, which would effect considerable saving, are often shelved.

The distribution of steam is under three headings; high pressure, process, and low pressure. The high pressure has to be maintained for the use of the steam electric generator and the laundry. The process steam, or medium pressure, is used for sterilizers, steam tables and steam cooking. This pressure has to be controlled to the required temperature, otherwise the results of sterilizing will be of no value. This applies particularly to autoclaves with temperature recorders. The low pressure is for building heating. The steam heating of buildings can be accomplished by means of thermostatically-controlled sub-atmospheric pressure and convector type radiators.

In our own hospital, we have four separate types of steam heating systems. There is a marked difference in steam consumption between the very old and the very latest types of systems, based on their degree day performance. A loop or "grid" system of steam distribution is arranged (I maintain it should be a "must" in these parts, considering our frigid winter season) as a form of auxiliary to ensure continuous service. Should a defect occur in any one part, the service can be re-routed to effect repairs.

Electricity

Like most other hospitals which took advantage of the possibilities of electricity in its early stages when direct current was the main system of supply, we still have our main lighting load and elevators on direct current circuits. Although all new additions and reconversions are, and should be, on alternating current, our vital electrical services (light and elevators) are supplied by a motor generator converter, with a steam electric generator auxiliary of sufficient capacity to carry the entire hos-



Chief Engineer MacLeod
in a pensive mood. Trouble for somebody.

pital load. This is a great advantage, as most stand-by service units are purchased for a minus capacity load, which is a great mistake. The most efficient and modern system of AC-DC conversion is by glass bulb rectifier.

The varied electrical requirements of a hospital—cauteries, X-ray, explosion-proof units, nurses' call system, special lights and radios—call for individual decisions. The claims one manufacturer makes for his own particular product are often offset by his competitor. In any case, the hospital staff has to balance any defects in installation, as I have yet

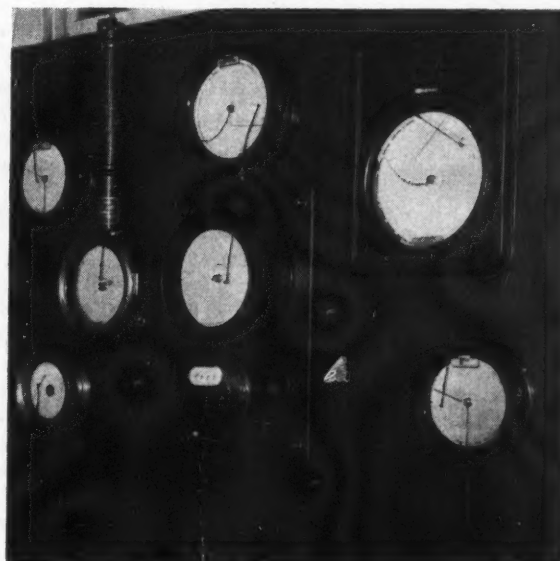
to see a piece of equipment of any appreciable size that can be fitted in exactly according to specifications; this makes the hospital electrician a specialist in his own field. A series of transformer vaults interconnected in a "grid" system ensures a continuity of service. Should a serious fault develop in any one transformer, the load can be instantly transferred to the other units until the fault is corrected. This system has distinct advantages.

Hot Water

The problem of constant-temperature hot water requires three factors for its solution. (1) Adequate heating capacity. The heater can be one of two types; either an instantaneous heater, supplying a temperature-controlled storage tank, or a storage heater in which the coils form part of the storage tank, also temperature controlled.

(2) Circulating system. This keeps the water in the mains and branch lines in continuous circulation, thus assuring water at the controlled temperature when the faucet is opened. This avoids unnecessary waste of heated water at some point remote from the heater, where the faucet has to be left open for a considerable time until the cooled water from the branches is drained out. Such a system of hot water circulation depends, of course, on local conditions. Where the water mains are not too long, the cost of installa-

Control panel
with recording instruments for steam pressure, steam flow, CO₂, water vacuum and air. "They don't sleep, don't cheat, don't boast; just honest service."



tion and maintenance may offset the saving in water and fuel.

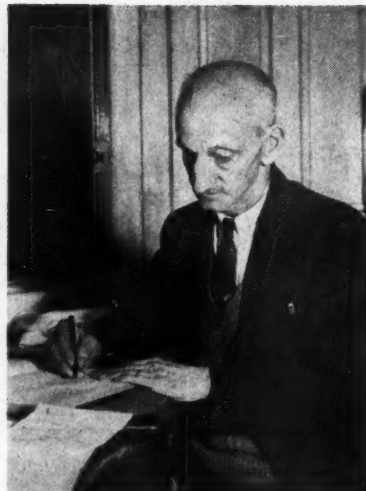
(3) Special cases like the surgeons' scrub-up sinks and the laundry require special attention. There are on the market at the present time various types of mechanical and thermostatically-controlled mixers for scrub-up sinks, each having their merits. For instance, if the water is at a constant temperature, with an efficient circulating system the mechanical mixer gives very good service, and its cost is less than that of a thermostatically-controlled unit. The latter is preferable where the temperature of the water varies over a wide range. The hot water for the laundry service can be supplied at the general duty controlled temperature direct from the hot water tank and supplemented by a booster heater in the laundry, or by the more popular method of supplying a live steam connection at boiler pressure (usually 120 p.s.i.) direct to the washers, mixers, etc., the connection being taken from the mains which supply the mangles, presses and tumblers.

Cold Water

The main problem with the cold water supply is to ensure ample and adequate sources of supply. If connected to the city mains, these connections should be attached to at least two different city mains. They should be looped and valved so that should a fault occur in one main outside the building, any leg of the loop would be able to supply the whole building. The same conditions apply to a defect inside the building. A deep well inside the building is very desirable, and is essential where air conditioning, steam or refrigeration-condenser units are in operation. However, certain local conditions prohibit this practice for general purposes. The by-laws do not allow cross-connections between city water mains and well water, and the sewage charges for the waste water may prohibit extensive use of the well water. But it is a good policy to have a deep well, kept in good condition for unusual emergencies. A hospital must have water, and any kind of water is better than none at all.

Compressed Air and Gas

Compressed air is a necessity in medium and large hospitals. The



"If I were to mention any one item making for hospital service and relationship of which I am particularly proud, I would say, without hesitation, 'Staff loyalty'. This is Mr. George Crowsley, my clerk, storekeeper and general source of supply information. He has been with us for over twenty-five years."

trend toward pneumatic-operated laundry presses, thermostatically-controlled heating systems, operating room practices and numerous other requirements calls for high, medium and low pressure filtered dry air. Domestic and institutional gas ranges for cooking are practically discontinued in the larger hospitals. Although it is the fastest heat used for cooking purposes, it has grave disadvantages in a hospital. There is the hazard of fire, through accident or distribution fault, plus the disturbing effect on patients, when the disagreeable odor of escaping gas penetrates and permeates the building. Gas must be used in the laboratories and, for this purpose, its maintenance, replacement and safety rule requirements are a constant care.

Safety

In hospital mechanical maintenance, whether the hospital has a capacity of twenty or two thousand beds, the psychology of service and safety has to be developed in the entire staff. Without this background, the most advanced and talented employee is more of a debit than a credit. The factor of safety has to do with (1) good workmanship, (2) alternate source of supply and distribution and (3) constant vigilance

with respect to fire, flood, heat and cold. Instruction and individual handling of the fire fighting equipment, extinguishers, pails, hoses, fire doors and sprinklers is a "must" with the entire hospital staff, male and female. General instructions are not enough. Fire drills, with the handling of equipment, are essential. Although these are somewhat impractical in the hospital, due to the disturbing effect on the patients, they must nevertheless, be practiced and constantly instilled in the staff. Knowing where to go, what to do, and how to do it, is the most valuable assistance in any emergency. Fire hazards are always present in hospitals. *There is no such thing as a fire-proof building.*

Where reproductions of articles or equipment are to be built or improvements made, much ingenuity and keen observation are required of the individual, be he engineer, mechanic, plumber, electrician or carpenter. Observation should be a daily routine: how can existing installations be improved, at what savings, and do the savings warrant the additional appropriation?

We of the engineering department must collaborate with an intelligent, sympathetic and practical class of people — doctors and nurses — who are highly co-operative and most appreciative of practical ideas which bring results. This in turn creates an enthusiasm in the staff, which is the core of co-operation and the essence of responsibility.

Paper Shortage

We regret that the quality of our paper had to be still further reduced in our January issue. For the first time it was necessary for us to drop to 45-pound paper to put the issue on the presses. This light-weight paper is not ideal because of some measure of transparency. When good paper was available we used 70-pound S.C. book stock, but in the past few years have dropped to 60-pound, to 50-pound and last month to 45-pound.

We shall return to prewar quality as soon as the situation permits, but in the meantime it will probably be necessary to print the journal on lightweight paper.

BCG Vaccination

in Saskatchewan Hospitals and Sanatoria

SINCE the discovery of the *tubercle bacillus* by Koch six decades ago, tuberculosis death-rates, case-rates and infection have fallen.

Side by side with spectacular success in protecting the public, we have observed the sad spectacle of the unabated breakdown of persons caring for the tuberculous sick. This became particularly noticeable in Saskatchewan in the early 'thirties among sanatorium nurses and attendants and nurses-in-training in hospitals. Phthisiophobia was developing among sanatoria employees and student nurses, and their tuberculosis-conscious relatives were restive. The condition threatened the efficient prosecution of the anti-tuberculosis campaign.

It was known that infection, as indicated by a positive tuberculin reaction, had fallen rapidly among Normal School students of the province, from 76 per cent in 1921 to 23 per cent in 1931. These young teachers were known to originate from much the same family background as that of the student nurses, and were on this basis regarded as a comparable group in the matter of infectivity of home environment. Bearing this information in mind, it was considered that the rise in morbidity rate might be due to a larger proportion of negatively reacting persons entering the hospital and sanatorium environment. It was decided to check up on the preventive

R. G. Ferguson, M.D.,
Director of Medical Services and
General Superintendent,
Saskatchewan Anti-Tuberculosis
League, Fort San, Saskatchewan.

technique practised in these infectious environments and to introduce periodical tuberculin testing and x-raying of nurses in the eight larger hospitals and exposed nurses and other employees in the three sanatoria of the province.

The findings of this study after five years' observation were: (a) that about 80 per cent of each class of nurses entering training since 1934 have been negative to tuberculin; (b) that by far the highest incidence of tuberculosis occurred among exposed persons who had been negative to tuberculin on entering the environments; (c) it was also noted that despite improvement in instruction concerning preventive technique, and the provision of improved facilities for the practice of this technique, little or no improvement in the protection of the exposed persons appeared to have been accomplished.

A possible solution for the problem was suggested by a coincident experience. During the period 1933 to 1938 a controlled experiment in the protection of Indian infants by BCG vaccination, without segregation during vaccination, had been carried on in the Qu'Appelle Health Unit in Saskatchewan, under the direction of the National Research Council. As a result, it appeared that a reasonable measure of protection was afforded these infants by vaccination while they remained in the infectious environment of their

homes on the Reserves; the death rate from tuberculosis among the vaccinated infants as compared with the control infants was in the ratio of 1:4. In view of this fact, it was proposed to the Council that an attempt be made to afford a similar protection to unavoidably exposed nurses and sanatoria employees in Saskatchewan, by means of BCG vaccination without segregation during the process of vaccination, that is, BCG vaccine to be administered after the negative reactor entered the infectious environment and while on duty. This proposal was accepted by the Council and as a result the work of vaccination was started in September, 1938.

Heimback, in a personal communication dated June, 1938, summarized his results with BCG vaccination up to May, 1938. He had been studying prophylactic vaccination with BCG at the Ullevaal Communal Hospital in Oslo since 1927. His observations were that the incidence among vaccinated nurses who became positive from vaccination had been much lower than among non-vaccinated negative controls. Among 341 made positive to tuberculin by vaccination there were 12 diseased and no deaths; while among 284 non-vaccinated negative controls there were 97 diseased and 12 deaths; among 668 nurses entering training with a positive tuberculin there were 22 diseased and no deaths.

It was considered that BCG vaccination of unavoidably exposed persons in the environments of the Saskatchewan general hospitals, where 35 per cent of all negative reacting nurses became infected during the training period, and in the

Abstracted from the November 1946 issue of "The Canadian Journal of Public Health". The original article is more complete in detail and is accompanied by a number of tables which analyze and summarize the findings.

Saskatchewan sanatoria, where the rate of infection of certain groups of employees for the first year of exposure was 60 per cent, would test the efficacy of this prophylactic.

In endeavouring to obtain suitable controls, the advice of the National Research Council's Panel on Tuberculosis was sought. Since during the period of vaccination there would be relatively few nurses and sanatoria employees entering the Saskatchewan institutions who would not be vaccinated, the Panel was unable to suggest a wholly comparable group of adequate size. It was recommended that a comparison be made of the experience of the vaccinated with that of similar non-vaccinated persons entering the Saskatchewan institutions during the five-year period immediately preceding the initiation of vaccination, making due allowance for changing conditions. The principles recommended by the Panel on Tuberculosis for the selection of cases and the treatment of the results obtained have been adopted.

The significance of the data was assessed by Bogen's method. The BCG vaccine used was prepared by Dr. Armand Frappier, Director of the Institute of Microbiology and Hygiene of the University of Montreal. The dose given was 0.2 mg. of BCG in 0.2 cc. solution; 0.1 mg. administered intracutaneously at each of two sites on the upper arm or thigh. Vaccination was instituted on the basis of a signed request by the individual desiring vaccination. Information up to March 31, 1945 is embodied in all these studies.

Experience in Eight General Hospitals

All nurses entering training in these eight hospitals in the years 1934 to 1943, inclusive, are included in the study.

The unusual significance of this study arises from the fact that all were females; the age of both vaccinated and non-vaccinated is considered a susceptible period, being age 20; the infectivity of the environment and period of exposure in the environment, probably the two most fundamental factors, are very comparable. There was no evidence that contact with tuberculosis prior to entering training was a significant factor.

The infectivity of the environment as shown by the non-vaccinated negatives has been relatively stable during the entire period. The year-by-year incidence of infection throughout the three years of training remained quite comparable for each class that entered training, being 11.5, 12.7 and 11.2 per cent respectively, for the first, second and third year of training.

The average periods of exposure to the environment of all groups are relatively quite comparable, being 2.42 years, 2.54 years and 2.47 years, for the vaccinated, non-vaccinated negatives and positive groups, respectively.

There were 2,042 cases accepted for study.

Findings: Among 1,005 vaccinated cases there were 9 who developed manifest tuberculosis, or 0.895 per cent (the term manifest tuberculosis used throughout this study means pulmonary tuberculosis demonstrable by x-ray, and non-pulmonary cases of tuberculosis); among 759 negative non-vaccinated cases there were 29 who developed manifest tuberculosis, or 3.82 per cent; among 278 cases positive to tuberculin on entrance, there were 3 who developed manifest tuberculosis, or 1.08 per cent.

The difference in percentages between the vaccinated and the non-vaccinated negatives is 2.925 per

cent, which is 5.8 times its own probable error, and therefore of statistical significance. The ratio is 1:4.27.

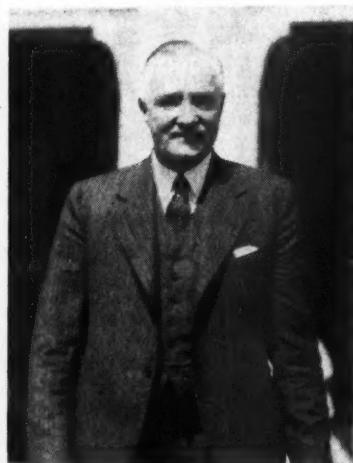
Experience in the Winnipeg General

(For purposes of comparison, morbidity statistics in this representative large hospital have been included in this study. Nurses were not vaccinated.)

BCG vaccination was not carried on in the Winnipeg General Hospital, and nurses entering training in this hospital during the period of 1934 to 1943, inclusive, were studied as a comparable non-vaccinated negative group for the above Saskatchewan study.

Since 1937 the hospital has discontinued the custom of sending nurses negative to tuberculin to the King Edward Sanatorium for affiliate training in tuberculosis nursing. Since 1939 the hospital has practised increased segregation in regard to tuberculosis—the Central Tuberculosis Clinic has been called on for consultation whenever a patient admitted to the hospital was suspected of having tuberculosis. If on examination the patient was found to be tuberculous he was immediately removed to the wards of the tuberculosis clinic. This segregation has had the effect of reducing appreciably the infectivity of the environment. In the classes entering since 1940 the infectivity has fallen from an average of about 50 per cent infected during training in the preceding classes to an average of 25 per cent infected during training. However, the average infectivity for the ten-year period 1934-1943 in both the Winnipeg General Hospital and the Saskatchewan hospitals has been very comparable; 37 per cent of the negative non-vaccinated became infected during training in the Winnipeg General Hospital, and 35 per cent of the negative non-vaccinated became infected during training in the Saskatchewan hospitals. The average period of exposure to the environment of the negative and positive reactors was 2.28 years and 2.39 years respectively, which closely approximates the average period of exposure in the Saskatchewan hospital study. The general living conditions were found to be comparable with the Saskatchewan group. Average age on entrance was the same, being 20 years.

Dr. Haywood Retires



Word has been received that Dr. A. K. Haywood has resigned as superintendent of the Vancouver General Hospital. See "Obiter Dicta" this issue.

There were 809 cases accepted for study.

Findings: Among 609 non-vaccinated negatives in the Winnipeg General, 26 developed manifest tuberculosis, or 4.26 per cent; among 200 positive reactors 2 developed manifest tuberculosis, or 1 per cent. Taking the Winnipeg General Hospital non-vaccinated negatives as a comparable group for the Saskatchewan vaccinated group, we find the difference in percentages is 3.365 per cent, which is 5.7 times its own probable error. The ratio is 1:4.8.

Combining both the Saskatchewan hospital study and the Winnipeg General Hospital study for the purpose of comparing larger numbers, we find that the resultant average time of exposure to the environments for the vaccinated, non-vaccinated negatives and positive groups is 2.426 years, 2.437 years and 2.43 years respectively. Among 1,005 vaccinated cases there were 9 who developed manifest tuberculosis, or 0.895 per cent; among 1,368 non-vaccinated negatives there were 55 who developed manifest tuberculosis, or 4.02 per cent; among 478 positives there were 5 who developed manifest tuberculosis, or 1.046 per cent. The difference in percentages in comparing the vaccinated with the non-vaccinated negatives is 3.125 per cent, which is 7.6 times its own probable error. The ratio is 1:4.5.

It would seem, then, that the use of BCG vaccination in the hospital environment has reduced manifest tuberculosis among negative reactors to its fourth. Of the 9 cases of manifest tuberculosis in the vaccinated group, only 66.6 per cent required treatment, while in the 55 cases of manifest tuberculosis in the non-vaccinated negative group 82.8 per cent required treatment.

There were no deaths from tuberculosis in any of these groups.

Experience in Three Sanatoria

The groups studied in the sanatoria were the vaccinated and non-vaccinated negatives and positives under the following occupations: graduate nurses, nurses' assistants, kitchen maids, orderlies and a miscellaneous group comprised of laundry staff, laboratory staff, x-ray staff and house maids, all of whom had a rate of infection higher than

that experienced in the hospital environments studied above.

The first three occupational groups are of the female sex and of an average age of 23.3 years on entrance. The occupational groups, orderlies and miscellaneous, comprise both males and females and their average age is 24.3 years on entrance. All employees entering the environment during the period 1934 to 1943, inclusive, were considered; there were 1,206 accepted for study.

The average time of exposure for the various groups, vaccinated, non-vaccinated negatives and positives, was 1.19 years, 1.44 years and 1.44 years, respectively. The rate of infection in the sanatoria environment for the first year of exposure is 60 per cent. This rate appeared high, so it was checked with that obtaining in the Manitoba Sanatorium and the St. Boniface Sanatorium and was found to be comparable.

Vaccination in such an environment will be put to a severe test and the findings regarding the efficacy of vaccination under these conditions should have considerable weight.

Findings: Among 470 vaccinated persons in the occupational groups

mentioned previously, 9 developed manifest tuberculosis, or 1.92 per cent. We attempted to correct the time factor among the vaccinated persons, assuming that the cases developing manifest tuberculosis in the additional three months' exposure (which will make the average time for the vaccinated entirely comparable with the non-vaccinated negatives and the positives, that is, 1.44 years) will do so at the same rate obtaining during the actual time exposed, 1.19 years. This calculation, to equalize the time factor, results in the following: among 470 vaccinated persons in the occupational groups mentioned previously, 11 or 2.3 per cent would develop manifest tuberculosis in 1.44 years. Among 274 non-vaccinated negatives in the same occupational groups, 32 or 11.7 per cent developed manifest tuberculosis. Among 462 positives in the same occupational groups, 13 or 2.8 per cent developed manifest tuberculosis. The difference in percentages between the vaccinated and non-vaccinated negative groups (using the calculated figure for the vaccinated group) is 9.4, which is

(Concluded on page 78)

BCG VACCINATION AMONG NURSES IN HOSPITAL NURSES ENTERING TRAINING—PERIOD 1934-1943

Accepted for study	Number of Persons	Tuberculosis cases	Per cent with tuberculosis	Probable error	Years observed	Average years observed
Nurses in eight Saskatchewan hospitals:						
BCG vaccinated nurses	1,005	9	0.895	± 0.2	2,434.4	2.42
Negative to tuberculin on entrance—non-vaccinated	759	29	3.82	± 0.46	1,926.9	2.54
Positive to tuberculin on entrance	278	3	1.08	± 0.42	688.1	2.47
Total in eight Saskatchewan hospitals—1934-1943	2,042	41	2			
Nurses in Winnipeg General Hospital:						
Negative to tuberculin on entrance—non-vaccinated	609	26	4.26	± 0.55	1,392.53	2.28
Positive to tuberculin on entrance	200	2	1.0	± 0.47	477.1	2.39
Total in Winnipeg General Hospital—1934-1943	809	28	3.46			
Saskatchewan hospitals and Winnipeg General Hospital combined:						
BCG vaccinated nurses	1,005	9	0.895	± 0.2	2,434.4	2.42
Negative to tuberculin on entrance—non-vaccinated	1,368	55	4.02	± 0.36	3,319.4	2.43
Positive to tuberculin on entrance	478	5	1.046	± 0.31	1,165.2	2.43
Total accepted for study, Saskatchewan hospitals and Winnipeg General Hospital combined—1934-1943	2,851	69	2.42			

***Increased Vigilance Necessary
at the Present Time***

Narcotic Control *in Hospitals*

DURING the war years there was an extreme shortage of narcotic drugs in underworld circles, and as a result the Narcotic Division was faced with a tremendous increase in the number of successful attempts to obtain these from legitimate sources. At the same time the price of narcotics so obtained has assumed fantastic proportions.

This, naturally, has extended the orbit of theft of narcotics from the petty addict or trafficker to the professional burglar or hold-up man, who finds the financial results accruing from the burglary of a place where narcotics are concentrated, such as a hospital, much more attractive than robbing or holding up a bank.

During the fiscal year ended March 31st 1946, we experienced no less than 225 thefts of narcotics from legitimate sources, although of this number only 20 involved hospitals. Every effort has been made to combat thefts by the most modern police methods, micro-photography having played a considerable part in the arrest of many well-known criminals. Although gross carelessness had been displayed in some instances, our very thorough investigation of all cases revealed in most instances that safeguarding precautions had been followed which might have been sufficient over a period of years when conditions were more or less normal, but which were definitely *not* sufficient at the present time when hospitals, et cetera, are being looked

upon by the underworld as fruitful sources of supply.

In correspondence with many hospital superintendents during the past few years, we have had occasion to criticize the excessive narcotic stock carried, and I think it would be most helpful if hospitals would endeavour to keep their narcotic stock down to the point which might be considered reasonably essential, rather than carry quantities (of some narcotics at least) which would last them for many months.

For many years the records, stocks

**K. C. Hossick,
Chief Narcotic Division,
Department of National Health
and Welfare**



K. C. Hossick

and manufacturing procedures of all licensed narcotic wholesale firms across the country have been regularly audited by chemist auditors of the Narcotic Division, and the services of these chemist auditors have been extended to a large number of public and private hospitals within the area of their operations, a service conducted from the angle both of narcotic control and of safety. Numerous irregularities, both minor and major, have been encountered. When these have been brought to the attention of the responsible authorities, they have been corrected. It is hoped that in the not-too-far-distant future we shall be in a position to extend this inspection service on a much wider scale. Unquestionably such service has been beneficial, as indicated by the large number of complimentary letters which have been received by the Department from hospital superintendents and by the numerous requests for information which the Department is receiving.

Actual Conditions Found

The following are some of the conditions, from the security angle, which we have found to exist following investigations:

(1) In one of the larger hospitals robbed, the safe containing the narcotics was found unlocked on the morning after the robbery. The dispenser, naturally, (and I have no doubt quite honestly) declared that he had locked it before leaving the night before. This gave rise to the suspicion, or at least caused investigation, into the possibility of its being an "inside job". However, we discovered later for an absolute fact that while certain people broke into the institution and were quite prepared to blow the safe if necessary, to their surprise they found it unlocked. Had the burglars been compelled to blow it up, there would have been a much greater chance of their detection, by reason of the unavoidable noise involved.

(2) The dispenser, before leaving, locked up the narcotics but left a bag containing a considerable quantity to be picked up by a nurse for emergency use during the night. However, after making the bag available and before actually leaving, the dispenser left the pharmacy for a

few moments, unattended and unlocked. During that period it was entered and the bag of narcotics stolen.

(3) All narcotics not actually on charge to a ward were kept in a basement room, together with all other hospital supplies such as soap and bandages. To this room there were several keys, and it was ascertained that each day at least a dozen hospital employees of various grades visited the room to obtain stores other than narcotics. As a matter of fact the hospital authorities were not aware of the fact that any theft had been committed until some time afterwards, when it was desired to replenish the stock in one of the wards.

(4) An addict, in hospital ostensibly for treatment, was located in the basement immediately opposite the room in which the hospital supply of narcotics was kept. Based upon the knowledge of hospital conditions which he had acquired, he had no difficulty in re-entering the hospital within a few days of his release, breaking open the receptacle containing the narcotics and cleaning them out. There is an angle to this case which I expect readers will find hard to believe, but which I can assure you is absolutely true. This particular patient, while in hospital, was slipping out night after night and actually burglarizing drug stores in the city!

Future Prospects

For probably five years at least narcotic conditions, both domestic and, especially, international, will be extremely unsettled. It would be sanguine to hope for any imminent return to ideal conditions. If opium production is eventually limited at its source through the future efforts of the United Nations Narcotic Commission—and this may involve years of effort—it will undoubtedly affect favourably the illicit international

This was a standard type of safe. The seams of the door were soaped on three sides and the cut was seven inches from the top left corner. Outer plate of door was not damaged though inner section was partially destroyed. The inner part was then pried off with large "spike bars". R.C.M.P. photo.



traffic. However, based upon our experience of the past five or six years, we would anticipate that it would definitely result in a recrudescence of thefts of narcotics from legitimate sources, such as hospitals, wholesale houses, physicians' offices and retail drug stores.

While we have reason to believe that the theft situation is beginning to come under control, it is nevertheless urged that hospital administrators continue to exercise most careful discretion in the selection and assignment of custodial personnel, keep their narcotic stock at the absolute minimum necessary, and take every precaution to ensure that narcotics are adequately safeguarded at all times; in regard to both the dispensary and the ward supplies.

Nurse Arrested in Hospital on Narcotics Charge

According to a Toronto police report, Frances Bernice Morrison, 33, a registered nurse, was arrested at Wellesley Hospital on January 18th on charges of theft, illegal possession of drugs and obtaining drugs under false pretenses. Apparently Miss Morrison entered the hospital in uniform and went to the third floor where she accosted a student nurse and asked for a quantity of morphine tablets for a patient on the ground floor. The student became suspicious immediately because of a similar episode at the Lockwood Clinic in Toronto just the day before when 9 capsules of morphine and 12 of heroin were stolen by a woman dressed in nurse uniform. On mention of calling the police, the woman bolted down the stairs but was caught and held by the night supervisor until police arrived.

This attempt at obtaining narcotics was frustrated because the police had spread an alert through all hospitals after the Lockwood theft and it was from the description provided that Miss Morrison was recognized.

WARNING

from the Chief of the Narcotic Division

1. Reduce stocks of narcotics to the absolute minimum.
2. Precautions adequate in former years are not sufficient today.
3. Select custodial personnel with caution.

RECENTLY I have made a great many inquiries of people in the building industry. Their views confirmed my own *that you should not build now*. Of the many aspects of this question, we may consider two in particular.

First, will prices be lower in, say, 1948? The guesses I have obtained from architects, presidents of large construction companies, officials in trade unions and others are that prices will rise over the next two years, then will fall off to a level higher than those now obtaining.

The second question has to do with the availability of men and materials. There we are deep in the realm of economics. During a building boom supply will likely always lag behind demand, and demand will have to drop before the gap can be filled. If we can assume that labour has got into its stride and that strikes will be less frequent than during the past six months, the amount of material rolling out of industry should, by 1948, be considerable. We have to bear in mind that the prime need is for housing, with hospitals second and, in some cases, on a par with housing as to priority. The housing need is staggering.

Last year we built 47,356 houses in Canada and in the first six months of 1946, 11,468. The lowest estimate of need is 50,000 a year for a decade (Sub-committee on Housing and Community Planning of the Committee on Reconstruction, 1944). The figure of 100,000 houses a year or a million in ten years is the goal set by the Minister of Labour. No serious student of the subject doubts that this figure is correct. With such a drain on building supplies and materials, all but the most essential building will suffer delays and shortages. In the face of these facts I should say: "Build later—*certainly not next year*."

It might be helpful if I stated at the outset why jobs cost more than they did, and why work is slow. The following statements were prepared by the Committee on Planning Construction and Equipment of Schools in Ontario, of which I am chairman. They were part of a report which

An address to the Ontario Hospital Association, October 1946.

Are You Planning to BUILD?

Eric Arthur, B.Arch., A.R.I.B.A.,
Professor of Architecture,
University of Toronto

was submitted to the Chief Director of Education.

Among the factors responsible are:

1. Inefficiency in some cases and in all trades due to age. Many mechanics have been brought out of retirement due to war and, now, to a peace emergency. Many others who were near retiring age in 1939 or later have carried on, and their physical condition has been under strain and has deteriorated.

2. Inexperienced men from school or the services are assuming duties in the trades for which they are, as yet, not wholly fitted. In these cases proficiency and efficiency will increase with experience. We are suffering at the moment from the unpreparedness of these men for full production.

3. More skilled supervision is necessary owing to the larger percentage of the unskilled among the work crew. A foreman, not using his tools, must be present to supervise much smaller groups than formerly. This not only adds to the

cost of the job, but loses to the project his productive skill with his tools.

4. We are in the vicious circle of a seller's market. The contractor can get another job and is daily refusing many—the subcontractor is similarly independent—the manufacturer can sell to anyone he pleases—the supply-man is in the same position—the workman is freer to pick and choose where he will work. Result: low efficiency and high costs.

5. The irregularity of the material and labour supply necessitates payment for unproductive time plus overhead.

6. The tax situation tends to reduce the production of materials beyond a point where excess profits taxes come into effect; in the case of workmen, where "take home pay" is substantially reduced. This may be the result of a mental attitude rather than actual calculation on the part of workmen, but whatever it is the effect is a slowing-up of production.

7. Government control of prices and production tends to restrict the continuous supply of building materials, increasing labour and overhead costs of building. Cast iron pipe, hardwood flooring, nails and bricks are examples of acute shortage.

8. Contractors are reluctant to enter into contracts at a fixed price unless very adequate allowance is made as a protection against contingencies due to rising prices and the uncertainty of the labour market.

9. The quoted price of lumber is frequently not the actual price. Where, for instance, a 2" x 4" is required, the price demanded is for a 4" x 8", "serviced" to 2" x 4", with a price for the service.

10. The aforementioned shortcomings and difficulties in construction under the present general conditions are particularly enhanced in the mechanical and electrical trades. Shortages of material are more prominent there, due to the fact that this type of material is used not only in construction but in industry at large. That field of industry which is supplying building materials has to supply both fields. Plumbing, heating and electrical work form a bottleneck. They have to split their supplies.

11. The number of bricks laid per

day is less than before the war, due to a number of the factors mentioned above, plus the fact that the bricklayers' helpers are less skilled than formerly. This applies to other trades as well.

You will see if you study these factors that many will right themselves in time. Some will be slow and others may change quickly. A year may not be long enough to provide bricklayers for the immense job of reconstruction that faces the country.

I sympathize with those of you who are under terrific pressure to provide beds immediately, but for those who can wait, or must wait, I have this to offer. For the only hospital with which I have been connected as an architect, we had almost a year to study the planning problem. It was a difficult one involving a substantial addition to an old and rambling building. I gather from my architect friends that that experience of mine was rare, and that *too often plans are rushed to completion* in the shortest possible time. It costs the client no more to give lengthy study to the planning of a hospital. It means that alternative sketches can be prepared to the owner's and the architect's satisfaction. Hospitals of similar requirements can be visited here or abroad, and adequate time can be given to the most desirable materials and equipment. Looked at from that point of view, a year or two years' delay is not a year or two years' loss of time. It could be argued with the best of reasons that the hospital designed in this way would be a better hospital and every avenue of economy could be explored. I would urge you, therefore, to decide to go ahead with your building program as quickly as possible and to see your architect at once about it.

I should like to say a word on the subject of design. Every year students graduate from the four schools of architecture in Canada after a five-year course. They go out enthusiastic about modern architecture, and in course of time get houses, schools and hospitals to build if they are lucky. Naturally I hear of their problems. Surely in the hospital, of all buildings, there can be no case against modern architecture and everything to be said for it. Could there be a more absurd anachronism

than a Georgian hospital? Inside your building you have shining steel surfaces and a highly complicated mechanical plant, and you clothe it in a garb which ante-dates antiseptics, ante-dates anaesthetics and ante-dates even Florence Nightingale by half a century or more. I would warn you, too, against a sentimental attachment to old and obsolete buildings where alterations are involved. Under no circumstances that I can imagine should their design affect new building.

Temporary and Semi-Permanent Buildings

Where rigid city building codes apply, this problem does not arise. In such cases urban land would be expensive, a multi-storey building would be required, and a fire-resistant building would be the inevitable and only solution.

Whether all the hospitals needed should be urban, in an era of rapid transportation, is something for you and the town planners to decide. I understand that a house is now being built in Toronto, or will shortly be built, with a heated driveway and a helicopter yard. Can we, with such

signs before us, condemn a hospital to from 30 to 100 years of life in the filthy air of a Canadian city?

I understand that fifty per cent of all needed hospitals will lie outside urban areas, and outside the jurisdiction of urban codes. The land required will be a great deal cheaper than city land. I am sure you are interested in that kind of hospital, its cost and construction. In face of the staggering-cost of hospitals, we must, it seems to me, get as many hospitals as we can away from rigid urban codes and build them in a manner that will be cheaper than the ordinary hospital, more flexible in plan, fire-resistant and of lower maintenance costs.

I find it difficult to visualize a temporary hospital, except for short-term use in an emergency such as war. The semi-permanent hospital is another matter. For such hospitals one storey will be preferable and two storeys a maximum. The capital cost today would likely be no lower than for a permanent building—it will be the job of research to get it lower—but the maintenance cost is reduced

(Continued on page 36)



The New Mount St. Joseph's Hospital, Vancouver

Since 1928 the Missionary Sisters of the Immaculate Conception have operated a hospital in Vancouver for the care of Oriental patients and 1946 saw the opening of the fine new building which is pictured above. The structure, 152 feet by 45 feet, is of reinforced concrete with stone and light red brick facing and is fire-proof throughout. Floors are of light buff terrazzo and corridors have Silotex ceilings for quietness. The ground floor contains the x-ray department, labor-

atories, kitchens and cafeteria. The three upper floors have single, double and four-bed wards, with a large solarium at the end of each floor. Rooms are brightened by pastel colours, light green, peach and cream.

St. Joseph's now has accommodation for 100 patients, including 6 bassinets and a children's ward. The approximate cost of the new building is \$500,000, while the equipment is valued at about \$50,000. The architects were Gardiner and Thornton.

heating bills would be considerable. The problem is not insoluble.

We believe that the physical life of schools should be about twenty-five years. Changes in methods of education, of visual training, of radio and lighting have been great in the last twenty-five years, and how much greater will they be in the next twenty-five? How much greater again will they be in hospitals? I see, as an ideal, a hospital of semi-permanent construction, cheaper than a permanent building, and so flexible in its internal arrangements that changes can be made easily and at no great cost. It could, therefore, be kept up to date within the limits of its external walls. Thirty years from now it would be for another generation to decide whether it should be pulled down, or whether it could still serve the community. At any rate, you would not be passing on to posterity a monument impossible to change except at great cost, and unsuitable for other purposes even as a gift.

I am quite sure that another generation will look back at us and wonder why, in 1947, we built hospitals with a physical life (if you wanted to use it) of 500 years, at a higher cost than we could afford to pay, when we knew before we started that everything in the building would be obsolete in less than half a century. Our answer would be that because our cities are what they are and our codes are what they are, we have no alternative but to build expensive, permanent, fire-resistant structures.

I believe, however, that we are entering an era of impermanence in buildings, much as we have become accustomed to in motor cars. This is especially true of highly-mechanized buildings. Along with rising prices of materials, higher wages and longer periods of leisure (it is now two days a week in most trades), we can see already bewildering examples of man's inventiveness. The time lag between a new discovery in science and its practical application is now measured in months or years instead of decades or centuries. All these things point to the necessity for as cheap a building as possible with a predictable, limited useful life. We are not ready to say what that building will look like, or how it will be constructed, but it is as certain to

come as the prefabricated house, which can be bought today in a cylinder and is sold by the pound.

This is a matter which cannot be solved by a committee of experts sitting round a table. The committee is necessary, but it must be backed by a body something like the British Building Research Station, or the National Research Council, which can build experimental structures. To my mind the need for such a study is urgent in many classes of building, but in none more so than in hospitals.

There is another matter which should be mentioned. It is clear that many of our hospitals are poorly situated. They may have anything from a railway track to a round house close to them, and in the path

of the prevailing wind. They were built at a time of haphazard growth in many of our cities and they were unprotected by zoning or other ordinances. Today that is inexcusable. Every city in Canada and most small towns have a city planning board, and most of them a master plan to which they are working. No hospital site should be selected without consultation with the planning authorities, and with their co-operation a site should be obtainable which will remain stable as long as the physical life of the hospital. The gain in human happiness from permanent pleasant surroundings and the saving in maintenance costs in an atmosphere free from grime are not matters I need stress to an audience such as this.

Endowment Fund Bequest Disallowed

HOSPITALS throughout Canada are concerned (that is, if they are at all interested in receiving bequests or legacies) in an interesting British Columbia case now before the courts. If a bequest is made to a church, loosely worded "to be added to the endowment fund" and that church has no endowment fund, is the church entitled to the legacy? The Supreme Court of the Province in this specific case says "No" and the church involved has now appealed this decision to the Supreme Court of Canada.

The will in question instructed the Trustee:

"To pay or transfer all the rest of my estate to the St. Andrew and Wesley Church, Vancouver, B.C., to be added to the endowment fund."

Although the proper name of this church is "St. Andrew's-Wesley United Church", this point was not contested. But the counsel for the next-of-kin did argue that the lack of an existing endowment fund made the gift "void for uncertainty" and that as the gift could not be demonstrated as for an unmixed charitable purpose, the "cy-pres doctrine" to validate it could not apply.

Various opinions were expressed by the judges of the Supreme Court. Much hinged on what seemed to be the real wish of the testatrix. One

stated, "she wanted to give her money to the Church . . . but she did not want the Church to be able to use the capital but only the usufruct of her gift". Another held, "there is an unambiguous gift to the Church, and that plain intention and master-provision ought not to be defeated by a factual error occurring in a direction incidental to the gift". However, one learned judge held that a church has many activities, not all of which are "charitable" and an endowment fund without any trusts might be used for any one of these purposes. Accordingly the bequest cannot be said to be charitable within the legal meaning and therefore it is impossible to find a general charitable intention expressed in the will. This viewpoint was supported by the Honourable the Chief Justice, who allowed the appeal.

There are many points of similarity in this situation and those which might arise when a gift is left to a hospital without designation of a specific use. Not infrequently a hospital is notified that it may at some future date anticipate a bequest from some individual. Where it could be done tactfully and without giving offence, the hospital, through its legal advisor, might find it wise to make discreet inquiries before it is too late concerning the actual wording of these clauses.

French Sanatoria

THIS interesting series of photographs is taken from a special number of *L'Architecture Française*, which devoted its issue of February-March, 1946, to some of the newer French sanatoria. These show much originality of design and a refreshing departure from the conventional box-like structure typical of this continent.

The detailed analysis of individual sanatoria is preceded by an excellent discussion of the general principles to be considered by an architect planning the construction of a sanatorium.

The two major differences between a general hospital and a sanatorium

are emphasized: that the patient in a general hospital spends but a short time, while a tuberculous patient *lives* for months and sometimes years in a sanatorium; and that a sanatorium, which is usually or ideally in an isolated location, must include adjunct services and facilities not so necessary in the general hospital situated in a city or town.

The triple function of a sanatorium must always be kept in mind by the architect: (1) the essential elements of cure—rest, fresh air and good food; (2) the medico-chirurgical aspects of treatment—pneumothorax, thoracic surgery, et cetera; (3) necessary provisions for the cultural and social life of long-stay patients. As the authors wisely point out, construction must be dominated and directed by the function of the finished building.

It is interesting to note that the authors consider 250 beds to be the maximum desirable for efficient administration. However, since in an isolated sanatorium the proportion of resident attendants of various kinds per patient is high, the establishment must be able to feed, lodge and provide for a considerable number of persons.

Courtesy French Information Service, Ottawa.

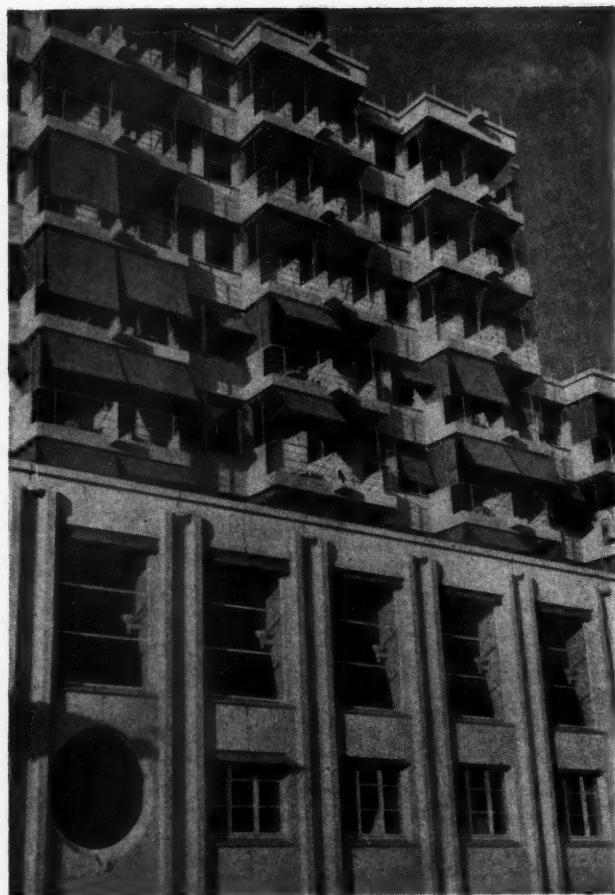


Above, right: South view of the Martel de Janville Sanatorium in the Haute-Savoie.

Above: One of the common rooms at Martel de Janville.

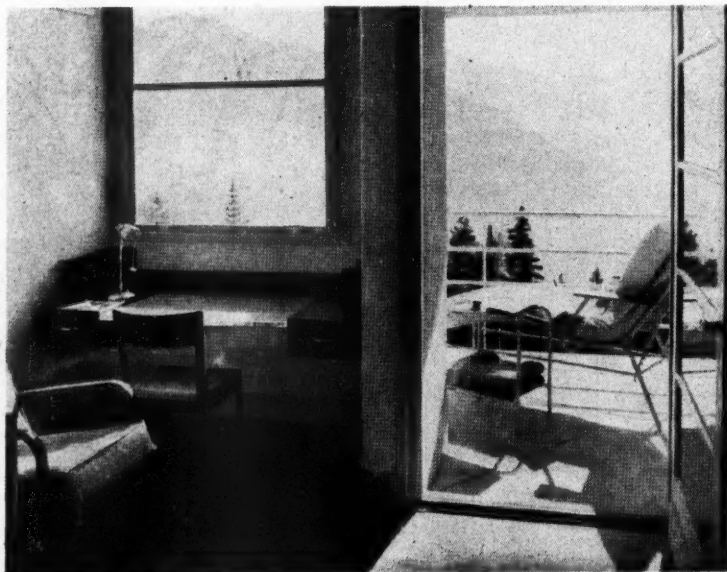
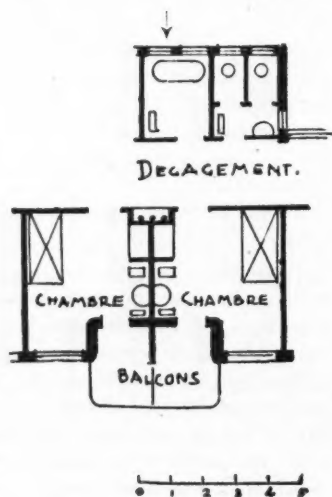
Right: Close-up of the facade at Martel de Janville, showing detail of balconies. Note that by this arrangement the bedroom windows are not darkened by balconies.

Below: An artistically-designed rest room. The round window gives a beautiful view of the French Alps.



Below, left: Detail of a unit, showing private balcony and bedroom window free of shade.

Below: A corner of one of the bedrooms. Note the free use of glass.

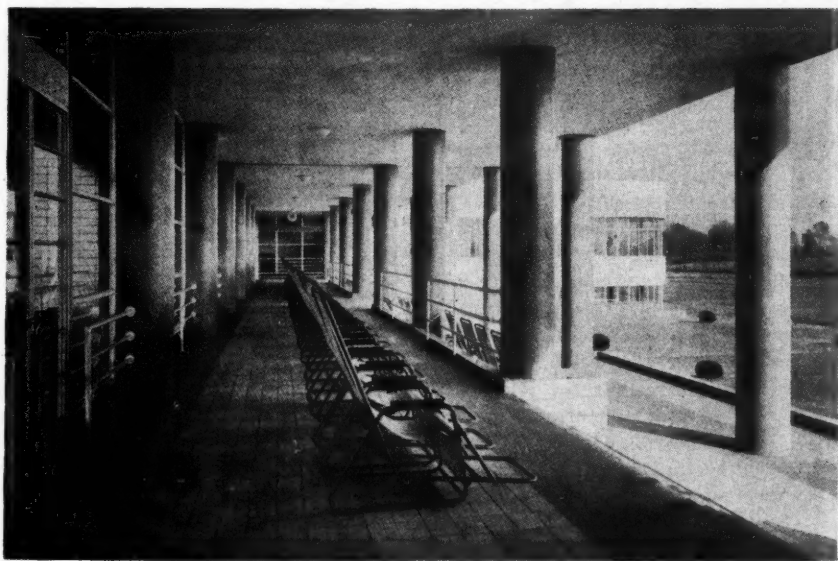
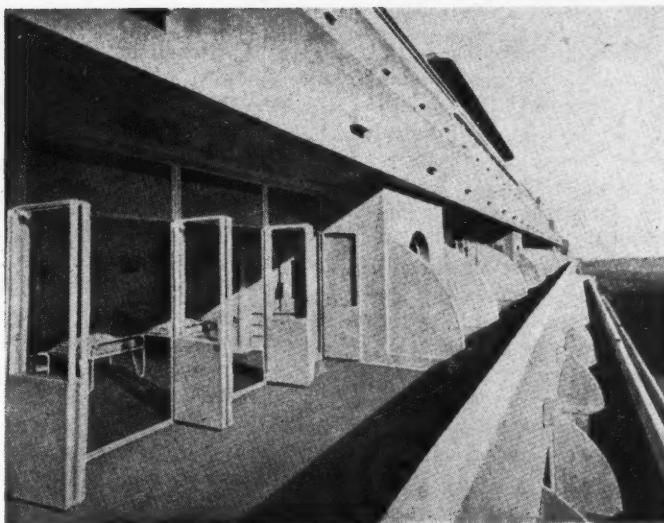




The Sanatorium de Vallauris, on the Cote d'Azur in France, has accommodation for 250 patients. It has been designed to provide, in addition to treatment and cure for the tuberculosis, a cultural and professional teaching centre — a rehabilitation school, in effect.

A pleasing detail is that the reservoir of water, so necessary in an institution where special cleanliness is required of every inmate, has been incorporated as an architectural feature giving a focal point to the whole building.

Above is a general view of the sanatorium and at the right one of the balconies with doors opening from the wards.



Left: An outdoor "gallery" at the Joseph Lemaire Sanatorium at Tombeek, Belgium. This 150-bed institution is ideally situated on a plateau just off the highway from Brussels at Namur, within easy visiting distance of two of Belgium's largest cities.

"As Ithers See Us"

*"O wad some Power the Giftie gie us
To see oursel's as ithers see us!"*

1. The NURSE looks at the Medical and Administrative Staffs

LIKE the proverbial turtle, I am really sticking my neck out; in a moment I'll probably be glad of a nice big shell under which to hide—one equipped with machine guns!

The common factor in the three-way relationship of medical, administrative and nursing staff, is the patient; the common objective—the care and welfare of the patient. Though we follow divers methods in accomplishing our objective, they should at all times remain compatible.

Together we are passing important milestones on the path of growth and development. If we are to keep this change a process of evolution rather than revolution, there must be a constant pressing forward without too many backward glances. Concepts and attitudes cannot be streamlined over-night.

However, let us take just one backward look for a moment—first, at the expense of the medical man. As a preliminary student, my mental picture of a doctor included a small black bag; so on my first day on wards when an important-looking gentlemen with a bag appeared and asked for hot water (in the movies all doctors ask for hot water!) I hastened to fulfil the request—and found out later that he was the barber!

Another case of mistaken identity occurred when as a beginner I happened to be creeping past the head nurse's desk—clad in the usual probationer's uniform minus cap, minus

Eleanor Bray, Reg.N.,
Assistant Superintendent of Nurses,
University of Alberta Hospital.

bib, minus nail polish, plus black stockings (shudder) — carrying the typical cleaning tray, when the chief surgeon appeared before me. "Are you the head nurse on the floor?" I didn't recover for a week and thereafter detoured all areas of importance.



"You can't win"

Nursing education has long been a problem to the medical profession. When the students are in class during the basic course the doctors' attitude is: "too much education! No necessity for teaching sciences! Are you making interns out of them? All we want is someone to keep patients comfortable." However, in the senior years, along come the doctors' lectures and the picture has changed. To understand what they mean by endocarditis as a complication of communicable disease, a good basic course in microbiology is essential. You can't win!

Doctors are Queer

Fortunately, or unfortunately, research has shown that the customs and characteristics of the medical man are closely related to those of other male human beings. For instance, if tea and toast are forthcoming following a late obstetrical case—"Now, there is a very fine nurse—good judgment". Or if a gal exhibits a well-turned ankle—"Now, that nurse will go places!" Well—could be—but remember the strong silent type with large feet, the Caledonia or Clementine type, who is well liked by her patients.

Many battles are waged in the operating room, silent and otherwise. The surgeon's conversation is always very colourful, if somewhat vague—"Where's the business, Nurse?" "You know, the business, I had it yesterday"—all well punctuated by (! ! ? ! !). Then after weeks of torture, the daily operating room experience is completed. He says how sorry he is that one is leaving—the best assistant he ever had! And all the time one had been making faces at him behind the mask when the 'flak' got too thick! So unpredictable!

Graduate Experiences

As a graduate nurse, similar problems occur but sometimes the chief difficulty is making "rounds" with doctors. Methods vary. One doctor takes hours—discussing politics, or shooting, with the patient, alternated by a,—"Give him luminal, grs Ducks Vitamin B etc. etc."

The other extreme tears along the corridor and down the stairs before all the patients have been visited. Then the rest of the day is spent reassuring the patient, "Your doctor is a very busy man . . . in the operating room . . . making home calls . . . at the office." About two days later, after a terrific build-up by the nurse, he says to the patient, "Why you should be having another diet . . . Vitamin B . . . I ordered it!" Then superman stalks off, followed by a retinue of interns in varying lengths of white coats indicating thereby their ability to spell penicillin or hold a retractor at the correct angle. After approximately 120 seconds the nurse raises her head from the rug and crawls out of the room.

Nurses, out of necessity, spend more time with the patients than do the doctors. We hear about Judy who is at school and Jimmy who is only three. Our patients are individuals; but sometimes like the medical man we think of them as 'interesting cases', a particularly *beautiful* gall bladder or a very *striking* appendix. Doctor "Remove It" orders 2000 cc's glucose and saline intravenously; his associate orders 1000 cc's! The problem is, will one toss a coin? Or give 1500 cc's? Or give 3000 cc's?

The modern patient has read articles in *Time*, *Newsweek* or *Reader's Digest*, regarding penicillin, sulfa, vitamin therapy and streptomycin, as well as descriptions of new surgical techniques and types of operations. Patients spend a great deal of money and travel thousands of miles to make appointments with surgeons of whom they have read in current magazines, or to receive treatment by a new drug. It would appear logical then to explain the use of new treatments and operations to patients, in order that they may co-operate satisfactorily; too often they refuse much needed medication due to fear and ignorance. Their confidence is shaken when the doctor disregards questions or gives an indirect answer. Their illness, no matter how slight, is of great importance to them.

Still referring to advertising, it is evident that millions of dollars are spent on useless or even harmful preparations due to 'super' methods of advertising, e.g.—radio programs, movies, and posters. It would seem

that their methods could be used to advantage for health purposes, preventive or therapeutic medicine and donations to hospitals. The movie "Sister Kenny" throws a false light on the medical profession and its attitude toward the treatment of anterior poliomyelitis. This is harmful; granted that we do not consider films to be necessarily a source of reliable material, your "public" nevertheless may be prejudiced by such information. Why leave doubt in the minds of prospective patients when we know that faith and confidence play an important part in the recovery of patients—a basic principle of psychosomatic therapy.

The Administrative Staff

Now, for the administrative staff. An important word in the vocabulary of the administrative staff is—"No". No nurses. No money. No instruments. No soap. Characteristics and habits of a typical administrator: He always appears on the scene when the corridor looks like Broadway—when all call lights are on, when the dressings nurse has overflowed the sterilizer, the orderly is whistling, the ward maid is scraping the door frame with a wagon, the telephone is ringing, and six doctors are making rounds. Then he has the nerve to say, "Your floor appears very quiet today; we shall move some of the staff elsewhere." At this time you wire Ponoka (mental institution) for that comfy padded cell; you are sure you are having visual and auditory hallucinations.

Patients and visitors alike are critical of hospital furnishings and equipment, instruments, dishes, screens, methods of air-conditioning, and lighting for nurseries. Nurses, strangely enough, are often interested in ward planning, in interior decoration, and in the layout of new hospitals or annexes. It would seem advisable to ask a nurse's opinion on the location of service rooms and laundry chutes in relation to the wards. Modern trends indicate small

wards with adjoining self-contained service units which eliminate unnecessary steps and thereby allow more time for nursing care.

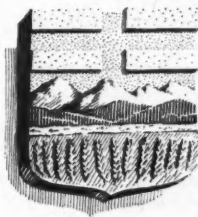
Actually, the public should be made aware of their responsibility toward hospitals. A public relations program would help to stimulate public participation. There are reasons for shortages of instruments and linen. Even doctors and nurses do not associate a strike in Hamilton with faulty forceps on Four West or in the operating room. Monthly newspaper articles could be published discussing pertinent subjects on which the public is misinformed, including the scarcity of special nurses.

Personnel management in hospitals, whether large or small, might follow more closely the pattern of commercial and industrial firms. Efficiency experts claim that a clear-cut orientation program, concise outline of duties, statement of salary and increases, pleasant cafeterias, and recreational facilities, all contribute proportionately to the total work output. Industry has found job analysis profitable; labour costs are stabilized and evaluation scales produced, resulting in long term personnel policies and satisfied employees.

Staff conferences are invaluable in order to formulate policies, to discuss common problems and to provide guidance and counsel. These conferences should include not only representatives from the administrative, medical and nursing staffs but members of special departments, e.g.—business office, pharmacy and laboratories, as well. Ward conferences at regular intervals with students and subsidiary workers have been considered excellent media for control, constructive criticism and teaching.

No hospital can operate without nurses, though technicians, maids, orderlies and business girls may resign. Then let us play fairly and squarely with staff nurses, eliminate unnecessary reports, detailed charges and cumbersome charts.

Enough is enough. I have had more than three 'strikes' this inning. The president (*Dr. McGugan, Miss Bray's administrator. — Edit.*) must have had ulterior motives in choosing his quotation from Burns' *Ode to a Louse!* I do feel insignificant but not quite that active.



2. The MEDICAL STAFF

Looks at the Nursing and Administrative Staffs

MY mind involuntarily goes back many, many years, to the medical superintendent and to the matron of nurses of the first hospital into which I had been permitted to enter. The superintendent was the famous Dr. Charlie O'Reilly, and the matron was the famous Miss Snively. They were the officers of the Toronto General Hospital, in East Toronto, and both were well qualified to exercise the autocratic authority that belonged to such hospital officials in those days.

I recall Dr. O'Reilly gathering us in the main hallway at the foot of the stairs. We were a bunch of medical students, rough and ready and characteristically uncontrollable. He addressed us as follows, with his usual nasal twang and cynical outlook:

"Now, look here, you boys! I want to tell you that hereafter there will be no one admitted to the operating room unless he presents his admission card. Outsiders are getting in, and we are not going to permit it. I want every person to understand that we are not going to allow outsiders to come in here and sit on our seats and *spit on our floors*; that's for our own boys."

Miss Snively was strictness itself. Her private office was off the hallway which joined the large admission corridor with the Eye, Ear, Nose and Throat Department. For the medical students to get across to that department, it was necessary for them to pass through this hallway, or else take a very circuitous route down to the basement, travel along a similar hallway below, then come up the stairs into the E.E.N.T. Section. Miss Snively insisted that the students must take the latter course; they were forbidden to pass through her hall. Everybody observed this except F. Arnold Clarkson, a great friend of mine, but one who consti-

G. D. Stanley, M.D.,
Calgary, Alberta.

tutionally objected to obeying authority.* One morning he said to me—"Come on over to E.E.N.T.", and headed toward Miss Snively's hallway. I warned: "You must go down below". He replied: "No, we go through here."

When we came opposite Miss Snively's door, he pushed the door



"There should be fixed conferences"

open a little further, and said "Good Morning, Miss Snively". Clarkson followed up, "I just came to tell you how much we have appreciated the new nurse you have up on the general ward." "Oh", replied Miss Snively, "Do you like her?" Clarkson replied, "Very much, but it's too bad you'll not keep her. We all feel sorry about it." She responded with surprise,—"We'll not keep her! Why not?" "Why", he replied, "You wouldn't keep a good-looking nurse like that. She's discharged already." Miss Snively wilted and laughed.

There are at least three definitely special fields in a modern hospital. First, there is the strictly professional medical field. Second, there is

*For many years Dr. Clarkson was Physician-in-Chief to the Toronto Western Hospital and has long been an authority on botany.

the strictly professional nursing field. Third, there is the strictly non-professional administrative section.

Each of these fields should have a trained specialist at its head, with the widest functioning authority, and there must exist the utmost spirit of co-operation between the heads of these departments and the assistants of each. Undoubtedly, one of these heads must be recognized as the senior official, and his position must be unquestioned.

There should be regularly fixed conferences between these officials and the assistants of their staffs, where heart to heart consultation should be promoted and where all jealousies or misunderstandings should be dissolved. Further, if the maximum of success is to be attained, each official should be approachable by anyone connected with the staff of the hospital, or by a patient in the hospital. Any attitude of superiority that frowns upon suggestions or advice, kindly or otherwise, is altogether inexcusable. If, for instance, I, as an anaesthetist, get the notion that two or three sterilized clothes-pins will help to maintain the anaesthetic screen during anaesthesia, I should not be compelled to put in a written requisition to the manager and receive his approval before the order can be placed. I know an anaesthetist who had to do that.

Medical Lectures to Nurses

Many of the lectures given by our medical men to the nurses are altogether too elaborate and too heavy. Frequently the nurses are expected to absorb more in five hours of lectures, than the medical men themselves had been able to absorb in five years! Hence, I suggest conferences between the medical lecturers and the medical and nursing superintendents, so that there may be a reduction of absurdity in expecting the nurses to do the impossible. Such conferences may also discuss another imposition upon our student nurses. The fact is that student nurses are expected to be present at lectures whenever they are scheduled; and incidentally, they are arranged at the time and hour which the doctor concerned decides is most convenient to himself. Perhaps this cannot be otherwise, but too often not a few

of these nurses should be in bed and having their normal sleep, instead of sitting up in chairs in the lecture room, where they cannot make a success of either absorbing the lecture, or of taking an uninterrupted sleep. I recognize the difficulties to be faced, but conferences might help find a solution.

Turning to Administration

Now, a few words to the administrative officers. No medical staff can justify its existence in scientific medicine, if it fails to urge constantly the addition of special and modern hospital services. The management and finance departments of hospitals should be prepared to listen to these demands and to understand their significance. The medical staff must not dispute the heavy responsibility which the management and finance departments face constantly. Nevertheless, it is still their duty to keep these departments fully informed in respect to special services. I refer particularly to such work as advanced laboratory specialties; modern and humane care of acute psychiatric patients; modern X-ray equipment; physical therapy facilities for the ever-increasing disabilities of such conditions as arthritis or paralysis, and the care of aged and convalescent patients. The medical staff realize the difficulties which these and other problems present to trustees and to municipal and provincial financial authorities; nevertheless, the medical staff, if it is to be conscientious to its trust, must be persistent in its urgings.

Now, let us reverse the approach. Let us consider a problem which management continually faces, and in which the medical staff, as a whole, does not assist as much as it might. I refer to admissions and discharges of patients. In these days of overcrowding in hospitals, and of difficulty in constructing hospital extensions, management will be perfectly justified in talking straight at the medical staff and in insisting upon co-operation. Personally, I think management will be well advised to compel each member of the medical staff to recognize that other doctors and other patients are entitled to equal consideration. All decisions in such matters belong properly to management.

In conclusion, may I extend hearty congratulations to the nursing directors and their staffs of teachers on several outstanding accomplishments in nurse education, which cannot be taught from text-books. The nurses' unfailing courtesy to the medical staff and to the patients in hospital is a real asset to hospital life and to our common profession. Further, the broad concept of professional ethics entertained by graduate nurses from our hospitals is on the same high level as that of the medical profession. The directors of schools are to be commended heartily on their selection of lecturers for these

schools. It is obvious that the training schools in this province are convinced that their work is to train students in a scientific profession, and not merely to train them as ward-helpers for the hospitals. Finally, I do not think I am going too far—and certainly there is no intention of mere flattery—when I say that our schools of nursing have instilled into their students an ideal philosophy. Nurses realize that they are in this world to make the most of their lives, and develop a professional confidence within themselves which will enable them to meet any emergency the future may present.

3. The ADMINISTRATION Looks at the Medical Staff

A. F. Anderson M.D., F.A.C.H.A.
Royal Alexandra Hospital, Edmonton

I AM speaking as a doctor who appreciates the difficulties of the medical profession. After all I did practise medicine for twenty-five years before I became an administrator.

I want to express my appreciation, too, of the help given by members of the medical staff in:

- (a) The care given by them to sick nurses;
- (b) lecturing year after year to the student nurses;



"There is a tendency to explode on occasion"

- (c) the education of the intern staff;
- (d) attendance at staff meetings and at ward rounds;
- (e) their helpful co-operation in raising the standards of treat-

ment given to patients in the hospital;

- (f) their assistance in handling complaints and in dispelling the faulty notions of chronic grouchers.

At the same time the medical staff has left itself open to criticism:

1. There is a lack of appreciation of the time and energy expended by the superintendent in dispelling criticisms by patients of services rendered by their own doctors—or the lack of them.

2. There is, too, a lack of appreciation of the efforts of the administration to cover errors both of omission and commission by members of the medical profession.

3. There is often a lack of co-operation by certain medical men in appeasing disgruntled patients who take umbrage at alleged errors or omissions on the part of the hospital staff.

4. Sometimes the doctors make erroneous or ill-guarded statements to the patients respecting accounts rendered by the hospital. Frequently they know little of the details and quite forget that all too often the shoe is on the other foot.

5. There is, too, an assumption of

knowledge of hospital administration that they very positively do NOT possess. As for the appointment of doctors to the governing body, it has been my personal experience that it is good for the doctors to get the layman's viewpoint and his criticisms. Through a staff representative on the Board of Directors the doctors get a valuable knowledge of the diversity of the many interwoven hospital problems.

6. There is sometimes a tendency to assume a superior attitude and to criticize hospital employees openly.

7. There is also a tendency to exhibit temperament. That is understandable, for they are at the beck and call of every Tom, Dick, and Harry twenty-four hours a day. There is a real tendency to explode on occasion. However the "biggest" and busiest men are usually the most courteous—and most co-operative.

8. All too often there is a forgetfulness of costs in giving orders. Doctors are suckers when it comes to falling for the high pressure salesmanship of manufacturing chemists. They ignore the hospital formulary or the fine one compiled by the Canadian Medical Association. They overload the laboratory by requesting every test under the sun, often permitting an unnecessary multiplicity of tests.

9. There is not enough attention given to medical records. The doctors don't want to write them themselves. And how can we expect the interns to continue to write good histories when the staff doctors are too damn lazy even to read the history? They fail to correct mistaken notations by intern staff and ignore the value of progress notes.

10. Moreover they suffer from "writers' cramp" when they should be signing patients out. When they do get around to signing the card, you can hardly read what they put down.

11. Doctors persist in ignoring the provincial hospital regulations, especially when it is a matter of sufficiently early admission for operations, or such matters as sterilization, operations on pregnant women, curdage, or Caesarian sections.

12. They have queer ideas about what constitutes an "emergency" operation. With many doctors it is

Administration Institute

*to be held in
Edmonton*

ARRANGEMENTS are now being made for an Institute on Administration to be held in Edmonton, Alberta, during the week of October 20th, under the auspices of the Associated Hospitals of Alberta with the co-operation and assistance of the associations in British Columbia, Saskatchewan and Manitoba.

The Institute held in Winnipeg last Fall was so successful that there was general agreement that another should be held this year in one of the other western provinces. All four provincial associations have approved this proposal and Edmonton has been selected for this year. Dr. Angus C. McGugan, administrator of the University Hospital, Edmonton, will be Chairman of the committees in charge of arrangements.

The Institute will probably run from Monday to Friday, the latter day being devoted to matters of particular interest to trustees who will be invited to attend.

Further announcements will be made in these columns, but, in the meantime, the committee in charge will appreciate suggestions respecting material to be covered from those planning to attend the Institute.

Committee in Charge

The committee in charge of the Institute has been named by the Associated Hospitals of Alberta Executive. The faculty will be drawn from various provinces and from the United States. The *directors* are

Malcolm T. MacEachern, M.D., C.M., and G. Harvey Agnew, M.D.

The members of the *Central Co-ordinating and Program Committee* are: Mr. M. Ross, Business Manager, Royal Alexandra Hospital, Edmonton; Mr. L. Wilson, Secretary, Drumheller Municipal Hospital and President, Associated Hospitals of Alberta; Sister Immaculata, Superior, St. Michael's Hospital, Lethbridge; Mr. N. C. McClellan, Vermillion Municipal Hospital Board; Mr. L. R. Adshead, Treasurer, University of Alberta Hospital, Edmonton; Mr. G. Hollingshead, Accountant, University of Alberta Hospital, Edmonton.

Committee on Finance: Mr. L. R. Adshead, Treasurer, University of Alberta Hospital; Mr. J. Gallant, Business Manager, General Hospital, Edmonton; Mr. F. Heathcote, Purchasing Agent, Royal Alexandra Hospital, Edmonton; Sister St. Louis, Misericordia Hospital, Edmonton.

Committee on Housing and Transportation: Mr. M. Ross, Business Manager, Royal Alexandra Hospital, Edmonton; Mr. J. Monaghan, Manager, Group Hospitalization Board, Edmonton.

Registration Committee: Mr. G. Hollingshead, Accountant, University of Alberta Hospital; Mr. R. McGuire, General Hospital, Edmonton; Mr. P. Robarts, Accountant, Royal Alexandra Hospital, Edmonton.

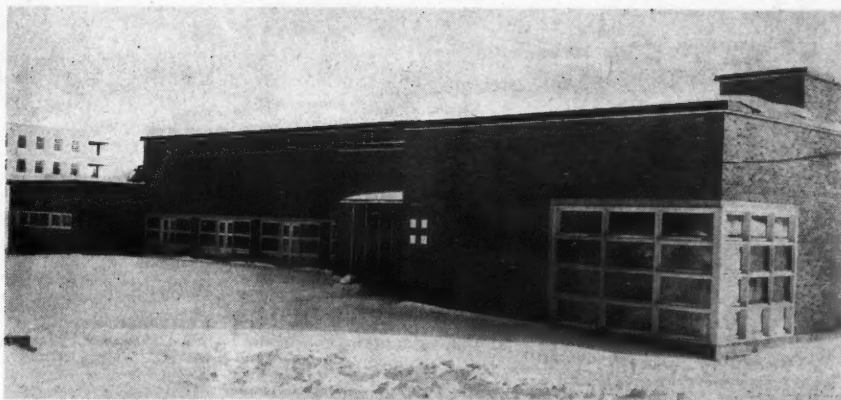
C.H.C. Given Further Assistance by Sun Life

The Executive Committee of the Canadian Hospital Council is pleased to report that the Sun Life Assurance Company of Canada again has made a substantial contribution to the work of the Canadian Hospital Council. The grant, with the contributions from the associations and conferences, will make it possible for the Council to carry on its activities.

any operation which they wish to do at night or on Sundays or holidays. The doctors who always cry "emergency" to get a bed ultimately lose out; the next time they cry "wolf" the admitting officer won't believe them.

13. Nor are they much help when we are trying to determine the residency of a patient.

And so ad infinitum et ad nauseam—but they're not such a bad lot!



Red Cross Lodge at Sunnybrook

Meets Needs of Patients

THERE is nothing of hospital atmosphere in the new Sunnybrook Red Cross Lodge, which was opened on January 30th. It is a large, beautifully decorated Lodge, which offers relaxation to the 150 boys who are now in Sunnybrook Hospital.

Completed at a cost of \$225,000,

Mrs. M. D. Stott,
Director of Public Relations,
Toronto Branch, Red Cross Society.

the Lodge has a lounge, games room, a reading and writing room, canteen and tuck shop. These rooms, and the bright, modern kitchen, are under the care of Red Cross Lodge volun-

teers, who work one shift a week. There are three daily shifts of approximately 20 women each, a total of over 400 volunteers under the capable chairmanship of Mrs. V. A. Hooper, previously chairman of Christie Street Red Cross Lodge. Mrs. E. A. Rolph is chairman of the House Committee. The volunteers serve in the tuck shop, take the orders for light meals, set up trays, do the cooking and act as hostesses.

The Lodge is the largest and most modern of the seven Red Cross Lodges in Canada. It was built by the Red Cross and furnished and decorated with contributions from various organizations and individuals who wished to share in the project. For example, the Leaside Lions Club and the Leaside Branch of the Canadian Red Cross gave \$3,000 to supply the leather furniture in the lounge. Col. G. L. Gee of Sydney, Australia, donated \$2,000 for the grand piano in the lounge, and the staff and students of Oakwood Collegiate in Toronto, gave \$2,000 to furnish the games room.

The Lodge was designed and built for the comfort and accommodation of the patients and future patients at Sunnybrook Hospital and their



The Commodious Lounge



Reading and writing room. Furnished by the Parkdale Women's Patriotic Association.



Miss Mary Cox, resident superintendent, gives room key to an out-of-town relative.

visitors. A tunnel connects the hospital and the lodge and an elevator brings patients up to ground level—making it easy of access in all weathers. There is a special phone booth in the foyer, which accommodates wheel chairs, and there are no rugs on the linoleum floors of all the public rooms, in order that boys on crutches and in wheel chairs can move about easily.

There are thirteen bedrooms in the Lodge, for the use of out-of-town relatives of patients who are

very ill. Room with breakfast costs \$1.00. A caretaker and his wife have a suite in the rear of the low, modern, L-shaped building, as does Miss Mary Cox, the resident superintendent. Miss Cox, who is in charge of buying for the kitchen and tuck shop, banking and supervision of general upkeep, is well fitted to understand and help the lads who come to the Lodge. She was overseas with the

Red Cross Corps, and was senior welfare officer in No. 15 Canadian General Hospital in Italy.

The Lodge is a bit of home for Sunnybrook patients, with good food in the canteen, a big chair and an ashtray in the lounge, a game of ping-pong, cards or a radio program in the games room, and quiet for reading and writing letters in the Reading Room.



Good night kiss for Daddy. Mrs. L. E. Ludlow, Red Cross Volunteer, looks on.



Mrs. V. A. Hooper, Chairman of the Lodge, and Mrs. E. A. Rolph, Chairman of the House Committee, watch a game of shuffle-board.

A. C. S. Proposes

Point Rating System

in its Approval of Hospitals

THE point system for the evaluation of the services and facilities of hospitals will probably be adopted in the near future by the American College of Surgeons in its survey of hospitals under the program of hospital standardization. A preliminary basis of allocation of points or units of credit was announced at the American College of Surgeons Congress in Cleveland by Dr. Malcolm T. MacEachern and one of his representatives, Dr. Henry G. Farish, who has done the detail work in elaborating the schedule of point allocations.

Further study of the point values assigned is to be made before official adoption of the new basis.

In making this announcement, Dr. MacEachern pointed out that one difficulty encountered at present is that hospitals are now in three classes only—approved, conditionally approved and not approved. There is no way of giving extra recognition to those approved hospitals which not only meet minimum standards but go far beyond these requirements in the organization and development of their clinical work. This new basis will permit recognition of these advances made by many hospitals and their medical staffs, and will have the added advantage of stimulating hospitals to do still better work rather than rest on their oars when they have gained "approval".

The A.C.S. point rating system, as outlined at the meeting by Dr. Farish (another of Dr. Haywood's illustrious family of former assistants), is based upon the principle outlined in *The Canadian Hospital* in November, 1943, but like the point system adopted for the payment of hospitals in Alberta and in Sas-

katchewan, is modified in many details to meet specific requirements.

Maximum—1,000 Points

Total maximum point score possible is set at 1,000 points. The allocation can be summarized as follows:

A. Basic Departments*	Points
Medical Staff Organization	300
Medical Records	150
Clinical Laboratory	100
X-ray Department	50
Physical Plant and General	50
	650
B. Non-Basic Departments	
Surgical Department	125
Obstetrical Department	75
Nursing Department	35
Anaesthesia Department	30
Outpatient Department	10
Pharmacy Department	10
Dietary Department	20
Physical Therapy Department ..	20
Medical Social Service	10
School of Nursing	15
	350

Total of A and B
before adjustment 1,000

To deal with various intangibles, some adjustment calculation in departmental point allocations will be necessary and some penalty deductions might be necessary in those instances where all requirements would seem to be met, but where there was definite evidence of unnecessary surgery, fee-splitting or other unethical practices.

The final point total divided by ten would give the percentage of approval (1,000 points divided by 10=100 per cent).

Basis of Allocation

The draft outline elaborates the

* Basic departments are those features of hospital work which are of primary importance in considering hospitals for approval by the American College of Surgeons.

basis upon which points under the various headings will be allotted.

For instance, under "Medical Staff Organization" points are allotted for the type of staff, the nature of the staff by-laws, methods and control of staff appointment, departmentalization, nature of staff meetings, keeping of minutes, departmental meetings, clinico-pathological conferences, intern services and relationship to the Governing Board.

Under "Medical Records" points are allotted for the contents of the medical records (87), the qualifications of the medical records staff, promptness in recording histories, records committee and method of filing and indexing.

Under the heading "Clinical Laboratory" points are given for the scope of work done, the type of direction and the qualifications of the director, the qualifications of the technical staff, the examination of all tissue removed, routine procedures, autopsy rate and other details. The "X-ray Department" is rated somewhat similarly.

Points allotted under "B, Non-Basic Departments" vary with the department. For instance, under "Surgical Department" (125 points), points depend upon adequacy of facilities, upon adequate nursing staff including trained supervisors, use of qualified medical practitioners only as assistants, sterilization methods, inclusion of pre-operative diagnosis, report of operation and other details on the chart, listing and investigation of all infections of clean surgical cases, control of unnecessary and incompetent surgery, consultation requirements and the post-operative death rate.

The "Obstetrical Department" (75 points) is evaluated in the light of such features as segregation of obstetrical patients, isolation facilities, adequate skilled nursing care, quality of the clinical records, care of the newborn by a qualified paediatrician, staff and departmental review of cases, technique, Caesarian section rate, and the maternal and infant mortality rates.

"Anaesthesia" (30 points) is judged by the qualifications of those permitted to give anaesthesia, the types of anaesthetic used, the nature

(Concluded on page 70)

Food and Its Service

Sponsored by
the Canadian
Dietetic Association.

THE Institute on Design, Construction and New Equipment for Food Service in Hospitals, the first of its kind, was conducted jointly by the Council on Professional Practice and the Council on Hospital Planning and Plant Operation of the American Hospital Association. There were 146 delegates, including representatives from most of the States, three from Canada and one from Australia. Of the entire group the major portion were dietitians, although there was a good proportion of Administrators, Architects and Sanitary Engineers.

Broadening of the field for dietitians was stressed. It was felt that they should have a working knowledge of pathology, admitting procedure, the legal aspects of hospitals as a whole, psychology applicable to patients and employees, and engineering in order to give the exact specifications necessary when ordering equipment and in the repairing of equipment.

Food service planning and construction formed the basis of prolonged discussion. In these sessions, Mr. Sam V. Wells, Food Service Equipment engineer, introduced Space Allocation and Layout of Operating Functions, which was enlarged on by Mr. Lewis J. Sarvis, Battle Creek, Mich., architect, in his talk on a food service plan for small hospitals of 50 beds.

The importance of suitable material for floors was one source of discussion that appeared to enter every session. The general consensus agreed that, of materials available, tile was the best, although a new material "Hubbellite" was a close second choice and Terrazzo tile was also favourably mentioned.

Closely allied with adequate floor covering were the discussions on proper acoustics in hospitals. Mr. Allen Wilson from the Acoustical Department of the Celotex Corporation, Chicago, voiced the importance of quiet and the elimination of need-

less noise at the source by the use of sound conditioning.

Among the many new materials and their uses in the modern hospital design, plastics, metal and wood development were discussed and, in the general resumé given of new developments in material and construction of fabricated materials, the general favourite was stainless steel for equipment.

Food and the facilities for handling it occupied a major part of the sessions of the Institute. The merits

Institute on Food Service

Anna M. Fanset, B.Sc.,
Chief Dietitian,
Hospital for Sick Children, Toronto

of selective non-profit cafeterias as well as those of the selective pay cafeterias were debated and resulted in the opinion that the type to be used depends entirely on the type of hospital.

Dr. Mary De Garmo Bryan from Columbia University was responsible for introducing some fresh ideas on factors in food preparation. Dr. Bryan emphasized that there were many problems to be solved in re-handling of food, particularly frozen foods, as well as better marketing and storage facilities at the source.

Basic fundamentals to be considered in designing the floor serving kitchen came in for considerable discussion and Martha Nelson Lewis,

Director of Dietetics, University Hospital, Columbus, Ohio, gave some enlightening facts on the principles of planning floor space. Location, number of kitchens, size, equipment, arrangement (for logical sequence and routing of food), with particular emphasis laid on sanitation, ventilation and the need for co-operative thinking in designing, were the highlights of a topic in which delegates joined in discussion.

In spite of the fact that little encouragement was held out for immediate delivery of new equipment, several sessions dealt with the recent developments in the field. These covered ventilation, controlling heat radiation, cooking equipment, plastics for food service facilities and furnishings, and refrigeration.

Modern refrigeration and freezing methods received a great deal of attention and centred about the factors that govern the size of equipment necessary. These included the number of meals served, the frequency of food delivery and the extent of quantity buying. Mr. Mark Mooney from the Carrier Corporation, Syracuse, N.Y., who reviewed current methods of food processing and new equipment developments, pointed out that the special considerations of hospitals would necessarily have to be taken into account in the purchase of equipment. The possibility of future expansion must be allowed for. Expert suggestions from the speaker included the separation of low temperature machinery (ice cream refrigerator) and high temperature machinery; provision for an even temperature; prevention of dehydration due to low humidity; the installing of refrigerated plates in horizontal positions or shelves; the use of stainless steel on the inside of the refrigerator and the benefit of having the entrance to the refrigerator through a refrigerated ante-room or refrigerator



Schools for Administrators

Review Instructional Approach

A MEETING of unusual interest was a conference on the training of students in hospital administration held in New York in January under the auspices of the Joint Commission on Education of the American College of Hospital Administrators and the American Hospital Association. Meetings were held at the Columbia University School of Public Health. Mr. Charles E. Prall, Director of the Commission, presided, ably assisted at various sessions or group discussions by Dr. Claude Munger, Dr. A. C. Bachmeyer, Dr. R. C. Buerki and Dr. Lucius Wilson.

Those invited, numbering some seventy or more, were directors and teachers of the five university faculties of hospital administration, the "praeceptors", or those providing administrative internships for the second year of training, several concerned with opening new schools and a number of senior students and graduates of the various courses.

There is no doubt that the graduates of these courses are obtaining an excellent grounding, one which few, if any, of their teachers ever enjoyed. Both the instructional and the internship year are highly organized with a view to giving students

broad and practical knowledge of the problems likely to arise in the hospital or any one of its departments. At this conference the experience of both teachers and former students of all of the schools was pooled and many important conclusions drawn.

The planning of the second or internship year was the chief topic under consideration and the agenda was based in part on the findings of Mr. Prall who, during the previous eighteen months, had studied 100 representative hospitals and had tabulated the major problems as offered by their administrators. One group at the conference spent considerable time working out a valuable schedule indicating to what extent emphasis on these points should be made in the instructional year, or left in varying degree to the second year of practical observation.

It is apparent that the administrative internship as now being developed is a far cry from the somewhat haphazard assistantships which formerly constituted (and still do) the usual approach to the administrator's chair. All too often instruction has been chiefly a matter of noting such problems as arise from day to day, especially those of relationships which are more apt to be

influenced by local factors than by broad recognized principles. Moreover, the assistant is usually assigned a department which may exclude opportunities to learn the essential features of other departments.

In these administrative internships the emphasis is being placed upon learning rather than working, the intern being given only those work assignments which are essential to give him the necessary knowledge of the administrative features of the department and to develop in him the requisite sense of responsibility. Moreover he is being given a schedule of rotation which routes him through every important department, from so many days in the boiler room and the laundry to a back seat at a Board meeting to observe how the administrator presents material to the trustees. It is quite possible that, in the near future, some basis of approval will be worked out for those administrative internships which conform to this comprehensive but quite elastic program.

It is pleasing to note that much emphasis is being laid in the instructional year upon a thorough grounding in accounting methods, in purchasing, in personnel relationships, in medical staff organization, in the inter-relationship of the various departments, and in the control of supplies and equipment. Much discussion takes place, too, on many topics not likely to be considered in as broad or as detailed an approach in the internship year; among these topics are the trends in nursing education, the relationship of the hospital and its facilities to the public health program, types of medical practice and relationships to the medical profession, prepayment medical and hospital plans and health insurance, the necessity of considering hospital provision for all types of illness, social service and so on.

Not the least pleasing feature of this conference was the active and very beneficial participation of the senior students and recent graduates. Their logical analysis of points under discussion indicated much knowledge and a high degree of orderly thinking. Also, their ability to make such clear presentations bespoke the value of the instruction in public speaking which some of the schools give as part of their public relations course.

← cooler, or, lacking this, a door of special construction.

Insight into the needs for improved equipment was given by Miss Fern Gleiser from the School of Business Administration, University of Chicago, who offered numerous suggestions to manufacturers of equipment. These covered a wide range from cookery research and improved storage to sanitation equipment and methods.

Miss Gleiser struck an interesting note in her comment on improved equipment in the prevention of employee fatigue. In addition, it was pointed out that lower kitchen costs

are achieved by greater efficiency in equipment. The speaker reminded equipment manufacturers of the need for improvement in safety devices.

The Institute in its week-long sessions learned also of the research work being accomplished in the use of air disinfection units and of the close relationship of these units in the control of infection and in the preservation of food.

One of the most interesting demonstration periods of the sessions centred about a mechanized method of washing dishes to reduce labour hours and dish breakage, given by Mr. Carlton Lawler of the Dunton Cafeteria, Dallas, Texas.

In Soundproof Building

Audiometer Installation

Permits Better Testing of

Hearing



Audiometer operator talking to a patient. She also has visual contact through the side window.

THE audiometer installed at the Queen Mary Veterans' Hospital in Montreal at the request of the National Research Council of Canada, for the use of the Canadian Services, has proved to be of great value in the study of hearing defects. This equipment was designed by Dr. Hector Mortimer, research fellow at McGill University and consulting otologist at the Montreal General Hospital, Mr. Anton Lawruk, electronics specialist

of the Northern Electric Company, and Professor E. Godfrey Burr, assistant professor of electrical engineering at McGill University. Construction was by the Northern Electric Company, Limited.

The purpose of the equipment is to permit accurate study of the nature of damage to hearing apparatus; the extent of damage; to forecast the course of disease; and to control treatment.

The audiometer is designed to en-

able the otologist to take the guess-work out of hearing examination. It is a piece of equipment intended for a hospital and not for the otologist's office and removes a time-consuming burden from the otologist by enabling a trained technician to carry out the organized routine of complex tests.

Basic Conditions of Audiometric Tests

- (1) The sound-proof room eliminates uncontrolled ambient noises;
- (2) The operator and equipment are not in the room so that the patient is not disturbed by the operator's presence;
- (3) There is a constant visual and vocal intercommunication between the patient and the operator;
- (4) Allows individual or group investigations;
- (5) The patient has no control of the headphone pressure;
- (6) The patient answers 'yes' or 'no' to a single stimulus;
- (7) The audiometer can provide 'warble' tones to aid testing in tinnitus;
- (8) The equipment can readily detect malingerers by certain tests;
- (9) Accurate calibration and match-



Patient receiving test. Light jewel on panel flashes with stimulus. If heard, patient presses switch in right hand; if not heard he presses left hand switch. For speech tests his answer by voice is picked up by the sensitive transmitter in the panel.



Exterior view of the soundproof chamber at the Queen Mary Veterans' Hospital.

ing of both oscillators can be made before a test.

Soundproof Room

Built at a cost of \$10,000, the soundproof room consists of an inner chamber with walls of perforated pressed asbestos over a thickness of rock wool over brick. The inner room is suspended on shock absorbing springs to eliminate vibration. There is an air space between the brick inner wall and an outer wall of reinforced concrete.

The room has a noise attenuation of 110 db., which means that a siren with a volume of 140 db. sounded against the outer wall will allow only 30 db. to enter the room. It is impossible to construct a completely soundproof room.

Audiometric Testing

The patient sits in one corner of the room, facing a panel which contains a light jewel and holding a switch in either hand. When a light appears on the panel he knows sound is being transmitted. If he hears it, he pushes the right hand switch; if he does not hear it, he pushes the switch in his left hand.

The technician, who sits before a control panel outside the room, has before her a series of knobs by which she can transmit stimulus to either or both of the patient's ears and also regulate the volume and pitch of the stimulus. There are two lights on the control panel which indicate whether the patient answers 'yes' or 'no'. Sound can be 'warbled' (i.e. converted to a rapidly intermittent rising and falling sound) to help a patient to discriminate between the stimulus and buzzing in his ears, if he should suffer in this way. It is

also possible to permit a controlled volume of background sound to accompany the stimulus. This background can be limited to either ear or transmitted to both ears.

For speech tests, the operator uses a microphone and a shuffled deck of numbered cards. She turns the cards over one at a time and reads the numbers aloud, varying the pitch and volume regularly with controls on the panel board. The patient answers by repeating the number, if he hears it.

The operator is able to draw a

complete picture of the hearing of the patient by charting his answers as curves on graphs known as "audiograms". In addition, "work sheets" are kept for each test and on them the actual stimulus transmitted to the patient for each test, as well as his replies, are recorded. Thus exactly the same test can be repeated at any time in the future by reference to the cards and any improvement or further deficiency noted.

Tests

Routine tests are carried out as follows:

- (1) To determine pure tone acuity threshold. (Air conduction)
- (2) To determine speech effective threshold. (Air conduction)
- (3) To determine pure tone acuity threshold. (Bone conduction)
- (4) To determine speech effective threshold. (Bone conduction)
- (5) Loudness judgment test—one or both ears at a time.
- (6) Pitch judgment test—one or both ears at a time.
- (7) Hearing aid fitting.

The cost of the audiometer itself was \$5,000, making the total cost of the installation \$15,000.

"Macneill of Dauphin"

Throughout a long and busy life H. N. Macneill, L.L.D., of Dauphin, Manitoba, has taken a leading interest in the public affairs of his community and province. He is a charter member of the Dauphin General Hospital, which was organized in 1901, and for many years has been



President of the Board and a life Governor. He has long been active in the work of the Manitoba Hospital Association, of which he is also a life member, and he attends every meeting regularly despite his advancing years.

One of Dr. Macneill's keenest interests is the broad field of education. "One cannot think of education in Manitoba without thinking of Macneill of Dauphin." These words were written in May, 1937 when the University of Manitoba conferred the honorary degree of Doctor of Laws upon Henry Macneill.

Perhaps Dr. Macneill's greatest contribution to education and health has been made through his regular visits to hospitals and schools and through the friendships which he formed among young people. He has, too, a true sense of that which is of real importance in life and an unerring faculty of selecting the right course of action. Among his friends he is proud to number many students. Who can say where the influence of such a life ends?

Obiter Dicta

The Situation in Great Britain

THE health legislation developing in Great Britain is being watched with considerable interest in this country. On the whole the hospital field does not seem to be as deeply concerned with the new order as is the medical profession, though both are deeply affected. Perhaps the fact that the large university voluntary hospitals are not being taken over by the state and that there are only a few hospitals operated by Sisters or other religious groups has made the transition easier there than could possibly be the case here where there would be much opposition by the voluntary groups. The original plan to take over the endowment funds for other than their original purpose has been abandoned, too, as a result of strong protests. The president of the British Hospital Association, Sir Bernard Docker, was warmly applauded when he stated that, having obtained concessions, they intended to do their best to carry out the act.

Most interest seems to be centred on the medical situation. The British Medical Association is strongly opposed to the government plan to put most of the doctors under the State Medical Service. True, a doctor does not have to come in, as the Ministry of Health has pointed out, but if a doctor's patients are in, there is little alternative left for him. Under the Plan doctors are to be paid a modest basic salary plus a fee for each patient on their books. Some inducement to do work that will attract patients is needed and also a basic salary to eliminate financial anxiety for the doctor. The British Medical Association is opposed to a number of features, including the cancelling out of the purchase and sale of practices, the placing of too much authority in the Minister of Health, the controlled location of doctors and the taking over of the hospitals. It feels that this is a long step towards state medicine and that an early subsequent move of the government might well be the placing of all doctors on state salary. A number of the regulations drafted to control various features of the measure seem to be particularly cumbersome.

In a recent ballot, which elicited an 80 per cent reply from some 58,000 doctors, 54 per cent voted against any further discussions with the Government about details; 64 per cent of the general practitioners would have nothing to do with it. As a result the B.M.A. Council has notified the Government that it cannot take part in any discussions respecting the Regulations under the Act. This now means an impasse and a serious situation may well result.

A serious feature of the situation is that the lay press, which determines public opinion to a major extent, is so strongly critical of the doctors. The press disregards the viewpoint of the profession, despite the obvious logic of many at least of their objections, and roundly condemns any thought of a partial "strike", although accepting without too much, if any, question, still more drastic action by workers in other essential industries. Much is made of the fact that the doctors strongly opposed the panel plan back in 1909-1911 and now wouldn't do without it. Probably this does reflect undue conservatism, but it is not noted that the Health Insurance Act of that day, as finally passed, was much improved over the original measure proposed, and that Lloyd George later admitted that it had been a mistake to utilize the friendly societies, et cetera, as he did to get it through.

It is very obvious that the profession has not done a good job over the years in its public relations, not realizing that good service is quickly forgotten or not noticed at all unless organized publicity is undertaken to comply with the requirements of a publicity-mad era. That many features of the government plan have distinct merit is obvious; these provisions have appealed to the press and the public to such a degree that other less tangible features are considered to be of minor importance. In view of the somewhat divided state of the medical house, it would seem advisable from this distance to concentrate objections on those details which most obviously mean reduced efficiency of service to the public, either directly or by lowering the quality and morale of the profession. Such action might well result in a strong reversal of public opinion.

The Michigan Survey

ELSEWHERE in this issue (page 54) we review some of the many points covered by the Michigan Hospital Survey. This study, published by the W. K. Kellogg Foundation of Battle Creek, should be in the hands of every hospital association executive and in every health department as an illustration of what might be covered in an analysis of hospital resources and needs. All too many studies in the past have been limited in scope, summarizing facilities available and estimating, on a more or less empirical basis, the beds needed for the future. Such estimates of the need usually have an Achilles' heel in that little if any effort is made in the survey to indicate the direction in which hospitalization trends are leading or to influence these trends into more desirable channels. For these reasons many estimates may be misleading should paths of development be other than those anticipated.

In this survey a definite pattern of development is laid down. Certain general principles with specific recommendations are set forth. These cover not only the subjects described elsewhere but such matters as rehabilitation programs, provision of convalescent care, health promotion in the hospital, standards of service, licensure of hospitals, and the various means of establishing closer relationship between hospitals. The social, economic and geographic data deemed necessary to work out an intelligent program of expansion are worthy of note. Nor is there merely an attempt to plug the gaps in the facilities available. The over-all program of hospital relationship, integrating all units from the two university centres down to the small community health centres, is suggestive of the programs planned in Manitoba and Saskatchewan. It is commendable that the Committee followed trading and social channels in defining areas, rather than adhering to artificial county boundaries which all too often ignore geographic and other barriers or handicaps.

It is obvious that the purpose of the Committee has been to lay down a pattern of development which would have the greatest long-range value. Because of that principle, the report tends to be idealistic rather than directly and immediately applicable to some phases of the present situation. For instance, its conclusion that a fifty-bed hospital is "the smallest unit in which adequate service can be provided and which can be operated economically and efficiently" (p. 36) may be quite true but it is a principle that is not likely to be accepted too readily by all of those communities which are unable to support a hospital of 50 beds though in need of some hospital facilities. However, the section on "Public Health and Medical Service Centres", which immediately follows, outlines the type of service which should be provided in these areas—a public health centre with certain diagnostic facilities, physicians' offices, beds for normal obstetrical cases and for emergency care; with improved winter roads and transportation facilities, this may be an acceptable solution. Nor does the Report deal with the problem arising where there are now two hospitals though one would be adequate; the Committee

merely outlines what should be provided in each area, leaving these details for regional solution. In one or two instances we question their suggestions.

Undoubtedly this Report will be of tremendous assistance to other states which are working out programs under the guidance of the National Commission on Hospital Care and it could well be an admirable guide for comparable studies in this country:



Doctor Haywood Resigns

ONE of Canada's senior administrators, a man whose reputation has extended far beyond his own hospital and, indeed, his own country, has announced his resignation from the post he has held since 1930. Doctor Alfred K. Haywood will be leaving the Vancouver General Hospital as soon as a successor can be appointed.

Graduated from the University of Toronto in 1908, Dr. Haywood took a two years' internship and then went to England and Germany for post-graduate study. On his return he was appointed assistant superintendent of the Toronto General Hospital. After seeing overseas service during the First World War (he was awarded the M.C. at the second battle of Ypres), he became superintendent of the Montreal General Hospital. From there he went to his present post at the Vancouver General.

Doctor Haywood is a sort of one-man university faculty in hospital administration. He is not the pettifogging type who believes that "if you want a thing done well, do it yourself". His theory (an infinitely wiser one) is that the neophyte should be given a sound training and then encouraged to assume all the responsibility for which his training and talents fit him. And it has worked. It is no coincidence that a round half-dozen of his former assistants have since risen to the highest places in the hospital field—presidents of the American Hospital Association, heads of large hospitals and so on.

In the national hospital field Doctor Haywood is also an outstanding figure. He has been a member of the Executive Committee of the Canadian Hospital Council since its inception, and has done invaluable work. He is a genial scrapper who can win or (rarely) lose an argument with equal good humour. He is a champion leg-puller, especially of nurses and trustees. He can enliven a dull meeting by dropping suggestions so controversial that even the most retiring cannot resist getting to his feet to contradict. He has the supreme knack of striking through irrelevant detail to the heart of a matter, and has all an active man's dislike of "referring the question back to the Committee" . . . when a committee has been appointed to decide a question, it should consider all the angles carefully and then *decide*. This ensures that any conferences chaired by "Alf" will be blessedly brief and businesslike.

Our regret over his resignation is tempered by the knowledge that his experience and wisdom will still be at the disposal of his own hospital and the national hospital body.—E.B.

Michigan Hospital Survey

Sets High Standard of Excellence

A HOSPITAL survey which might well be considered as a model for other state or provincial surveys is that of the "Hospital Resources and Needs" of the State of Michigan released in January.

This report was prepared by the Commission on Hospital Care appointed by the American Hospital Association to conduct a two-year, nation-wide study of hospital care in the United States. A Study Committee had already been appointed in Michigan by the Michigan Hospital Association to initiate a study of the state's hospital resources and needs. It was agreed that a study of the Michigan situation would be undertaken by the national body as a pilot study for the guidance of studies to be made in other states as part of the national program of hospital expansion. The State of Michigan lends itself well to this purpose, as it embodies huge industrial areas, many medium sized towns, agricultural areas and some areas very sparsely settled.

The study was a very comprehensive one. Not only was there obtained very complete information regarding hospital facilities and needs, but studies were made of vital statistics, of population trends, ages of the population, problems of rural areas, economic and geographic factors in determining hospital needs, and other important considerations.

Role of General Hospital

A very important section of this report deals with the role of the general hospital. On the whole it is recommended:

(1) That the general hospital not limit admissions to one primary type of case and that it should provide

essential service necessary for care of the types of patients who are admitted.

(2) That general hospitals, whenever possible, provide for the care of communicable diseases, certain types of cases of tuberculosis, nervous and mental diseases, chronic diseases and convalescent patients.

(3) That the general hospital be organized as the focal point through which the health services of the community are integrated.

(4) That an integrated program be established between the general hospital, tuberculosis sanatoria, nervous and mental disease hospitals and institutions for chronic and convalescent patients, to the end that the scientific equipment and professional personnel in the general hospital may be used to assist in the care of patients in those institutions.

Acute Communicable Diseases

After discussing the role of the general hospital in the care of acute communicable diseases arising in its community, the Committee recommends:

(1) That general hospitals provide physical facilities and all services necessary for the treatment of communicable diseases.

(2) That special contagious disease hospitals now operated by counties, cities and villages be discontinued or that their function be expanded to include the care of other types of illness.

(3) That means be developed whereby the care of contagious disease patients now financed from tax funds can be subsidized in general hospitals.

(4) That hospitals conduct educational programs designed to show the

advantages of caring for communicable disease in the general hospital and to achieve public acceptance of such procedure.

Pulmonary Tuberculosis

Taking the viewpoint that the general hospital should take a greater interest in the detection and care of tuberculosis, and that many such patients could readily be cared for in general hospitals, it appears desirable to the survey Committee:

(1) To establish new facilities for tuberculosis adjacent to and in relation with general hospitals, so that technical facilities and competent medical personnel may be available for surgical procedures and other special services required by these patients.

(2) To make routine radiological chest examinations of all patients and employees in all general hospitals.

(3) To continue the maintenance of existing sanatoria and to provide convalescent and rehabilitation programs in them.

(4) To establish a relationship between the general hospital and the tuberculosis sanatorium, in order to provide surgical care and consultation services in other special fields of medicine.

(5) To establish proper isolation and nursing techniques in those general hospitals where tuberculosis patients are treated, in order to protect personnel and other patients from cross-infection.

(6) To develop a practice whereby state and county governments that now provide care for tuberculosis subsidize the care of tuberculous patients in approved voluntary general hospitals.

Mental Illness

Deploring the lack of provision in most general hospitals for patients suffering from early mental diseases, it is suggested:

(1) That large general hospitals provide facilities for the diagnosis of nervous and mental patients residing in the area served by the hospital and for the treatment of those patients who are not in need of long-term institutional care.

(2) That changes be effected in commitment laws, so that certain types of mental illness may be effectively treated in general hospitals.

(3) That integration of service between general hospitals and nervous and mental hospitals be established, in order to provide surgical care and consultation services in other special fields of medicine.

(4) That arrangements be made with governmental units for the subsidy of care of certain types of nervous and mental patients in general hospitals.

Chronic Diseases

A valuable section deals with the

care of those who are chronically-ill and emphasizes the present lack of facilities or the inadequacy of the treatment given.

In the care of chronic conditions, the general hospital must consider whether it should develop special facilities or integrate its facilities with those of specialized institutions. It is suggested:

(1) That special facilities be constructed adjoining large general hospitals, for the care of chronically-ill patients.

(2) That provision be made for the care of certain types of chronic disease in general hospitals in small communities.

(3) That regulation of nursing homes for the care of chronic patients be established to guarantee a high grade of service in this type of institution.

Diagnostic Facilities

It would appear that the hospital is the logical place to which to refer patients for all types of diagnosis. The diagnostic clinic is growing in public favour. It avoids duplication

of equipment; saves the time of the professional staff; is more convenient for patients; and permits more effective medical care. The following recommendations are suggested:

(1) That hospitals and public health departments co-ordinate their efforts to conserve space, equipment and personnel, by integrating the functions of preventive and curative medicine, bearing in mind, of course, the limitations of their respective fields and the part each should assume in the program.

(2) That the outpatient department, organized and developed on sound principles, should be an integral part of the hospital and of the health service of the community. Outpatient departments should provide the common grounds upon which the activities of the department of public health and those of the medical profession can be integrated and co-operatively developed.

(3) That hospitals make their laboratories and other diagnostic facilities readily available to all members of the local medical profession as well as to the members of their medical staffs. Diagnostic clinics should be established in the interest of both the general practitioner and the patient.

Sections of the Report deal with standards of service to be maintained by hospitals, with the duties of trustees and the selection of trustee boards, the selection of a hospital administrator and the importance of seeing that he has every opportunity to keep abreast of the times. There is a section on the medical staff and its organization, on oral and dental services in hospitals and on nursing service. Recommendations are made respecting medical social service and the location of physicians' offices in hospitals as a growing trend.

Nursing Education

The discussion of this subject is concluded with recommendations that:

(1) Schools of nursing should be organized upon a sound educational basis, preferably related to colleges or universities, but at least conducted only by large hospitals with adequate financial resources.

(2) In order to provide a well-rounded clinical experience, affilia-

Red Cross Agrees to Underwrite New Plan for Nurse Education

The Canadian Red Cross Society has agreed to underwrite, for an initial period, a study project to determine the costs of a demonstration school for nurses financially independent of the hospital with which it is connected. The Canadian Nurses Association has been desirous of making an experimental study in which a school for nurses, although intimately connected with its mother hospital, would be financed entirely apart from it, relieving the hospital of all costs of nurse education and financing itself in part by remuneration from the hospital for nursing services rendered. The extent to which such a plan could be financed from remuneration for these services, tuition fees and other sources of revenue, would have to be determined, and this guarantee of financial assistance from the Canadian Red Cross Society will make it possible for some hospital to undertake this experimental study without additional cost to itself.

Funds made available by the Red Cross will amount to \$40,000 a year for four years, or \$160,000 in all. It is possible that, under this arrangement, a course of intensive study might be developed which would permit graduation some months earlier than is now possible with the three-year course.

We are informed by Miss Agnes Macleod, chairman of the Committee on Educational Policy of the Canadian Nurses Association, that the Committee has not as yet selected the hospital for this study.

tion should be arranged with other general and special hospitals, including tuberculosis sanatoria and hospitals for mental diseases, and with public health agencies in both rural and urban communities.

(3) Hospitals which conduct schools of nursing should maintain separate budgets for hospital nursing service and nursing school. Curriculum studies should be made in order to reduce the time required for completion of the general nurse training course. Post-graduate courses in special types of nursing should be provided.

(4) Schools of nursing should be

developed as co-educational institutions because of the need for male professional nurses.

(5) Schools for the training of vocational and practical nurses should be established. Courses of nine to twelve months are recommended.

(6) Laws governing the registration or licensing of nurses should be studied and revised.

Rural Areas

The conclusion of the Commission was that a program of rural hospital expansion should be a long-range program, bearing in mind the neces-

sity of having medical and technical personnel available, and also that young physicians would not willingly go to rural areas without hospital facilities. The Commission recommends:

(1) That hospitals be constructed only in those communities in which the size of the population, the availability of medical and technical personnel, the economic conditions and other factors justify such facilities.

(2) That the location of rural hospitals be contingent upon a reasonable expectation that a high quality of medical care can be developed and maintained in the institution.

(3) That in order to justify their creation in rural areas, hospitals be designed to act as the focal point from which all health services in the area emanate.

(4) That rural hospitals provide office space for physicians, facilities for public health activities, and certain diagnostic services for patients who cannot readily be transported to larger centres.

(5) That facilities be provided in some outlying regions in which physicians can conduct regularly scheduled clinics or be available for consultation at specified times and in which a nurse can be available for emergency care pending the arrival of a physician.

(6) That in order to secure a more adequate supply of physicians in the rural areas, loan funds or tuition scholarships or a combination of these be provided by the state for qualified medical students from rural areas.



Immediate Benefits for Blue Cross Babies

Above are the first infants to benefit by the Maritime Blue Cross Plan's new arrangement whereby a baby is now entitled to 35 days' hospitalization immediately after birth when its parents are enrolled under a family contract. These premature twins of Mr. and Mrs. Felicien J. Landry of Moncton, delivered at home, were admitted to the Hotel Dieu and given incubator care after it was found that they could not be given adequate care at home. Mrs. Landry and Miss Dorothy Fowler, Moncton Supervisor of the Victorian Order of Nurses, are shown with the infants.

Under the new arrangement, the waiting period for maternity service under a family contract has been reduced from ten months to nine. Instead of paying but 50 per cent of the hospital bill for 12 days' hospital care, it now pays the full bill for eight days, the usual hospital period today. Under the third change newborn infants may be registered as dependents at birth, instead of after a waiting period of sixty days, thus providing continuity of care through infancy and childhood.

Of particular importance is the recommendation "that there be a minimum of 15,000 persons living within a radius of not more than thirty miles in order to justify the construction of a hospital of 50 bed capacity, which is deemed to be the smallest unit in which adequate service can be provided and which can be operated economically and efficiently. (This recommendation pertains to the rural regions. It is not its intention to justify the construction of small hospitals in cities or suburban areas.)" It is also recommended that the general hospital should not exceed 750 beds in size. The reasons given are "in order to

(Concluded on page 70)

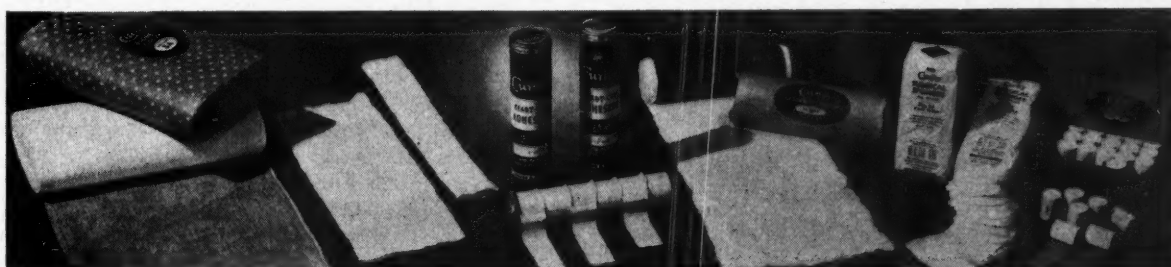


BETTER — YET CHEAPER!

Curity Lisco Sponges are specially designed for post-operative dressings ("flats"), for wipes and for small absorbing dressings. A highly absorbent web of Densor cotton (a patented Curity product) is folded into these gauze sponges. Great capillarity and high absorption power are outstanding qualities of Lisco Sponges—more speedy and more effective in drying skin surfaces, and in absorbing and retaining drainage.

For post-operative dressing use they are superior to all-gauze sponges because of their greater absorbency. Yet they actually cost less than all-gauze sponges of comparable size and thickness.

There are two Lisco Sponge sizes—3" x 3" and 4" x 4". Lisco is also available in roll form, known as Lisco Roll. It is used to replace the 4½" Gauge Dressing Roll.



Curity stands for the finest in research and scientific attention to the manufacture of gauze, cotton, adhesive tape and combinations of these products. It is responsible for the unmatched quality of Curity Sutures.

Products of

(BAUER & BLACK)

Division of The Kendall Company, (Canada) Ltd., Toronto, Ontario



RESEARCH TO IMPROVE TECHNIC . . . TO REDUCE COST

Further Progress Made *towards UNIFORM* **Accounting and Statistics**

AT a three-day meeting in Winnipeg immediately prior to the Manitoba Institute on Administration, much progress was made by the C.H.C. Committee on Accounting and Statistics in its discussion of hospital accounting procedures and methods of statistical return. Although bad flying weather delayed the arrival of certain members of Mr. Percy Ward's Committee, everybody finally arrived and the discussions were probably more fruitful because of the reconsideration of some items thus rendered necessary.

In addition to the members of the Committee, quite a number of others were present by invitation in order to take part in the discussions as representatives of the provincial Governments, the D.V.A. or other bodies. Altogether some twenty-one participated.

Among the topics discussed in some detail were the statistical requirements of the Dominion Bureau of Statistics, the cost study made in Ontario, the "point system" for the payment of hospitals, the Manitoba plan setting up hospital accounting on a cost basis, the Saskatchewan program for determining hospital costs and the preparation of a manual on uniform accounting procedures. Much consideration was given to the tempering of accounting and statistical return requirements to the ability of the smaller hospitals to make these studies. It was pointed out, for instance, that British Columbia has five large hospitals, ten of medium size and sixty-nine small hospitals.

The following resolutions epitomized the thought on the major topic of discussion:

WHEREAS: The need of hospital managements for an accounting system which will provide adequate

financial and cost information to aid in the efficient administration and operation of hospitals is recognized;

AND WHEREAS: The hospital accounting system must be so designed as to readily provide the information required by the Dominion and Provincial Governments;

AND WHEREAS: Considerable progress in achieving these objectives with special reference to accounting and costing methods has been made in several provinces and in particular in the provinces of Ontario and Saskatchewan where manuals of hospital accounting and costing methods are being issued;

AND WHEREAS: It is desirable that full advantage be taken of the work already accomplished in this direction with a view to securing the ultimate benefits of uniformity in hospital accounting and costing methods for all hospitals in Canada;

THEREFORE BE IT RESOLVED that: The completed accounting manual for hospitals in the Province of Ontario which forms the basis of the accounting manual for hospitals in the Province of Saskatchewan be submitted by this Committee to the interested departments of the Dominion and Provincial Governments and to provincial hospital associations for consideration and appropriate action with a view to the ultimate preparation of a manual of hospital accounting for universal adoption in Canada.

And be it FURTHER RESOLVED that: The chairman of this committee be requested to appoint a sub-committee to carry out the necessary studies of the completed manuals of the Province of Ontario and those already adopted or about to be adopted in British Columbia, Saskatchewan, Manitoba and the Maritimes together with the comments received from the various Governments and hospital associations and to report to this committee their recommendations concerning those revisions which will be required to provide a uniform accounting system for all Canadian hospitals;

And be it FURTHER RESOLVED that: Subsequent to consideration and approval of the sub-committee's recom-

mendations by the main committee, the approved form of the uniform manual be submitted to the Executive Committee of the Canadian Hospital Council for appropriate action concerning the approval, preparation and distribution of the uniform manual;

And be it FURTHER RESOLVED that: Every effort be made to have the completed uniform manual in the hands of the Canadian Hospital Council by April 30, 1947.

A committee to draft the manual of uniform accounting procedures was set up, with the following members:

A. McLean (B.C.), *Chairman*; C. C. Gibson (Sask.); Mr. Turner (Man.); A. R. Davey (Ont.); Dr. J. A. Clark (Maritimes); and with members to be appointed from Alberta, Quebec, and the Federal Department of Health and Welfare.

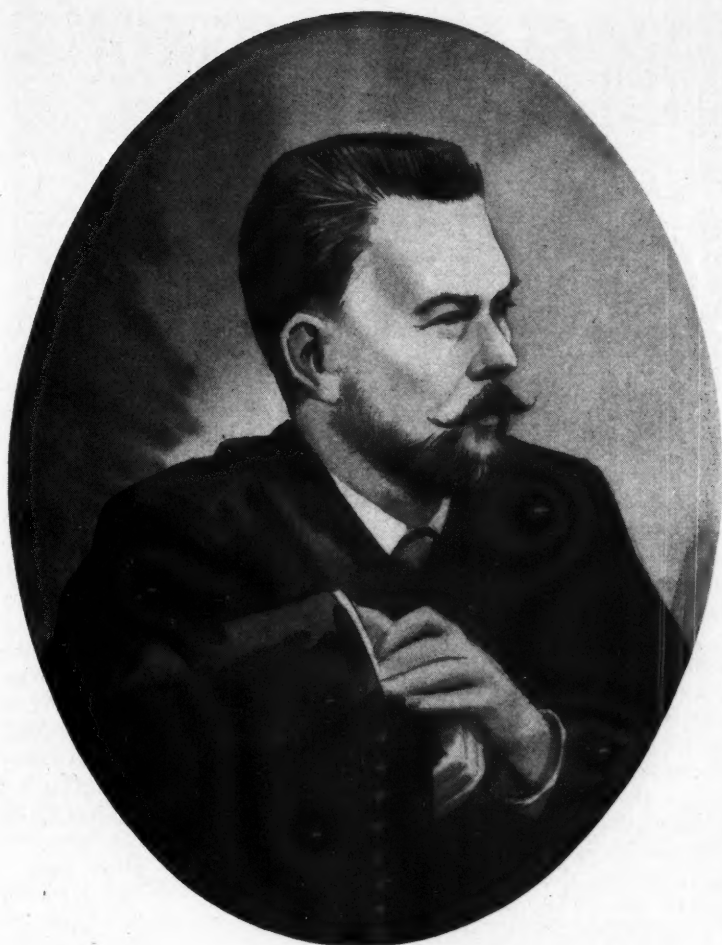
With the consent of Mr. James C. Brady of Ottawa, it is likely that the information requested of the hospitals by the Dominion Bureau of Statistics may undergo some revision in various details during 1947.

Health Plans at Trail, B.C.

After thirty years with their own medical and hospital care plan, employees of Consolidated Mining and Smelting Company, Trail, B.C. adopted the combined program offered by Blue Cross headquarters in Vancouver and Medical Services Association sponsored by the British Columbia Medical Association. Approximately one hundred per cent of the Trail organization's employees, some 4,800 persons, as well as 9,000 dependents, enrolled effective October 1. The company is paying fifty per cent of the combined fees for each employee. Married men and women pay the balance to give them family protection.

The combined plan offered to employees of Consolidated Mining and Smelting Company is the type now generally offered through Associated Hospitals Services of British Columbia, with fifty per cent of costs, the Plan reports, "invariably paid by the employer".

All the doctors and surgeons of the province participate in Medical Services Association, sponsored by the British Columbia Medical Association. Although the plan is offered independently of Blue Cross, both organizations work closely together.



Henri Varnier

From deep sorrow to a great triumph

WHILE he was a French military surgeon, Henri Varnier's mother died in childbirth, after he had vainly given her his own blood by transfusion.

From that day on he devoted his life to obstetrics. He x-rayed living pregnant animals until he knew he could safely x-ray pregnant women. He was the first man to obtain a Roentgenogram of the fetal head, near term, with sufficient clarity to judge its size, position, degree of flexion and engagement. This was in 1899, only four years after Roentgen had discovered the x-ray.

Varnier died while he was still young, and a contributing cause to his early death was overwork.*

Men like these pioneered the science of x-ray—and yet in scarcely fifty years, their names and deeds have been forgotten.

Though it is small homage, we plan to recall their deeds on these pages; and to strive in our plants to perfect the science they started.

Thus, in the future, as in the past, you may know that Ansco X-Ray Materials will always bring you sharp, clear radiographs of high diagnostic value.

**Ansco of Canada Limited, 60 Front Street West,
Toronto 1, Ontario.**

*Henri Varnier, by George J. Engelman, M.D., *American Gynecology*, May, 1903.

Ansco

X-RAY FILMS AND CHEMICALS

Number 1 in a series

With the Hospitals in Britain

By "LONDONER"

Nursing in Great Britain



C. E. A. Bedwell

Dear Mr. Editor:

Your powerful article in the September issue stimulated me to revert to the problem of the shortage of nurses, as it is common not only to our two countries but also to Australia and the United States. There would be general agreement that the kind of publicity used is an important factor in the situation, and some perhaps might think that the hospitals have failed to make their contribution to the improvement of it—perhaps through lack of appreciation of its importance. In this connection there is special interest in a book which has just been published with the title, "Why no Nurses?". The author, Mr. James Barclay, is described on the publisher's wrapper as "an officer of an important public health authority" and it is clear that he can survey the subject from a more detached point of view than most of those who write about it.

Mr. Barclay has obviously a special knowledge and interest in the subject of publicity and makes the point that nurse recruitment is a misleading phrase. Our object is to approach girls to enter a particular occupation, and we have to look at it from their point of view as an alternative to a number of other possible choices. Mr. Barclay would have a special public relations officer to undertake the work. The suggestion is already in operation under the auspices of King Edward's Hospital Fund, the London County Council and other bodies in collaboration with the Ministry of Labour. The line of thought which Mr. Barclay pursues on this aspect of the subject is well illustrated in the series of suggestions which he puts forward and may be quoted at length, though

there may be nothing particularly new in them to your readers:—

"That special study should be given, in reviewing methods of publicity to be adopted for nursing recruitment to counteracting the natural and universal repulsion of the idea contained in the word 'hospital'; that special consideration should be given in this connection to the value of school-hospital and hospital-school visits, at present undeveloped; that advertisements other than simple statements of vacancy should be examined with a view to removing any content of the dramatic, or display on the part of the advertising authority; that the positive values of the nursing profession, its responsibilities and satisfactions, should be simply set out; that it should be made clear in all publicity that the student is free to leave at any time she may choose; that study should be given to the achievement of publicity designed to remove the conventional aspect of nursing from the prospective student's considerations (to the extent that this aspect has been removed in fact); that press publicity should include weekly talk features of 200-300 words on aspects of nursing life; that a particular aim should be to dispel the general fears and uncertainties of the new entrant."

But Mr. Barclay realizes that action in improving the conditions is one of the most important factors in making the service more popular. In particular he lays stress upon the need for the governing authorities to take a personal interest to see that the regulations made for the benefit of the nurses are really carried into effect. Many of their good intentions are blocked by the conservatism of ward sisters and matrons who create

the atmosphere in which the nurses have to carry on their work. The nursing hierarchy is probably more tied to tradition in this country than in yours. The description of a meeting between several of our matrons and one of the chiefs of your nursing service remains in my memory. Her graphic account of their attitude towards nursing problems as compared with hers was neatly summed up in the remark, "I'm no Florence Nightingale". Their devotion and attachment to mid-Victorian ideas creates an alien atmosphere to a girl coming from a good school. However much the committee may improve material conditions, that still operates against her enjoyment of the work. As for the financial side upon which the lay press lays so much stress, it does not hold the same position in the minds of the girls nor even of their parents.

The Ministry of Labour and the Ministry of Health have realized that the high percentage of girls who fail to complete the course for some reason or another is one of the most important factors in the situation. Accordingly a survey is being made to collect evidence from the nurses themselves as to the causes which operate against their continuance in the work. It is not easy to get it from those who have gone into other occupations, but the attempt is being made to obtain evidence which should be really helpful towards the solution of a difficult problem.

While on the subject of the work of nurses, reference may be made to another article in the same issue of your magazine which dealt with the training of practical nurses. *The Lancet* has been pressing for the creation of a grade of nurses on the same lines, though with a two year basic training which would give them the necessary knowledge and experience to carry out the duties set forth in the Manitoba Act.

CHRONIC "CAST-ROOM-ITIS"



SYMPTOMS

"Headaches" and discord in region of cast room. May become acute and spread to other parts of the hospital in cases of extreme inconvenience or loss of time.

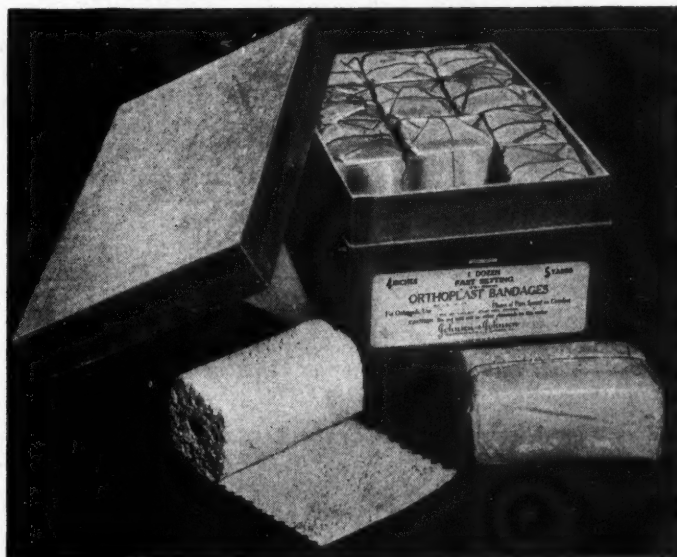
USUAL CAUSES

Difficulty of maintaining uniformity of handmade bandages and adequate stock of necessary sizes due to limited personnel.

RECOMMENDED TREATMENT

Quick relief can be obtained by switching to "Orthoplast" Bandages. Saturate quickly. Always ready. Conserve time, labor and materials.

FOR *Streamlined* CAST TECHNIQUE



... many hospitals
now standardize
on convenient

"ORTHOPLAST"

PLASTER OF PARIS

BANDAGES*

Orthoplast Bandages — neat and time saving, with less waste and greater economy — provide uniform, reliable immobilization and support.

Orthoplast Bandages are made from the best, selected grade of plaster of Paris spread *uniformly* on serrated-edge surgical crinoline of 32 x 28 mesh. The serrated edges of the crinoline prevent ravelling and tangling of threads that hinder the application.

Johnson & Johnson
LIMITED MONTREAL

*Sizes available (Fast and Slow Setting):
2", 2½", 3" — by 3 yds.; 4", 6" — by 5 yds.

Here and There

"Cut for the Stone"

ONE Dr. Joannis Van Loon, who lived in Amsterdam in the 17th century, tells in his "Recollections" as translated by his grandson, nine times removed,* the following incident which he experienced when travelling in the New World. He was at this time interested in investigating the wisdom and learning of Indian medicine-men, concerning which there had been rumours.

On a certain occasion Dr. Van Loon travelled far to the westward to visit the famous Five Nations (Iroquois) who promptly surrounded his small party and locked them up in a wooden stockade for three days and three nights. When he was finally given an opportunity to explain that he was a visiting physician, the Iroquois braves were immediately interested. Had he ever used a knife as they had heard white people could do? Had he instruments? Assured of all this, they escorted him to a small village where from every tent came the noise of low wailing. An old crone sat by a small fire. She was the mother of the head chief. Her son was in great pain and would soon die. Could the strange physician cure him? If so he would be given freedom to roam through the territory of the Five Nations. If not all of the party would be killed out of hand. This announcement did not ease the doctor's nervous tension.

Dr. Van Loon followed the old squaw to a corner of the camp where a small wooden house was surrounded by a circle of fires. These had been lit to keep the evil spirits away. Inside the structure lay a man of perhaps fifty years of age. His face was distorted with pain, lips

tight and hands clenched. Six women, three on either side of him were singing a low dirge. The doctor made a few inquiries, touched the abdomen and made a guess. He told the mother that her son had fallen victim to a Devil who now lived inside him in the form of a pebble, that he would capture and remove this devil if everyone did as he bade them. She agreed. All but the two huskiest wives were sent away and the interpreter stood by with a candle (probably stolen from some murdered Dutch trader). The wives were instructed to hold the patient down and Dr. Van Loon made the incision. In his own words: "I never knew such fortitude. The man hardly winced. I took the stone out with my forceps (I don't believe in touching any wound with my hands, as my French colleagues do), and I bandaged the wound". Knowing the natives to have almost incredible powers of recuperation, the doctor expected the man would be able to walk in a few days but to ensure that the patient should not be disturbed by other forms of treatment, he instructed the mother to allow no one to enter that night lest the Devil return. She asked where the Devil was now and he replied: "In my pocket. But he is still very lively. During the night I shall tame him and in the morning I shall give him to you and you can drown him in the lake or burn him in a fire."

Dr. Van Loon then rested for a few hours, to be awakened in the early morning by such a beating of drums that he feared for the worst. Undoubtedly the old woman had called in a native medicine man and the chief had died. A procession arrived and he and his party were marched to the village, convinced that they would be summarily executed. "At least a million" wild savages danced excitedly about and there before his hut stood the patient of the previous evening, dressed in his best leather coat and wearing no

shred of the bandage placed about him with such care. He was apparently feeling perfectly well. The doctor tells us that he then understood the glowing accounts given by explorers of the medical achievements of the Indians and he points out that these reporters had made one small error of judgment due to faulty observation. His own conclusion was: "The doctors of the wild men are atrocious, but their patients are perfect. For where else in the world would one find a man who less than twelve hours after being cut for the stone is able to walk home unassisted?"

* * * *

It's All in the Viewpoint

"Jeez! Noo Yawk's a racket," noted the taxi-driver as he pulled up for another interminable wait where the sidestreet comes to Broadway. "See dat guy wit' da nice new cab? Me, I shoulda had mine foist, but he slipped da lousy dispatcher twenty-five bucks and I don' get mine till I cough up. Outa me own pocket, too! . . . Yeah, I got swell brakes—ain't killed nobody yet, touch wood" (tapping his head). "But mister I gotta lay out four bits ever' time I go to the garage fer a checkup . . . Sure it's up to the comp'ny but dis is extra—gravy fer da guy in overalls. No tip—he keep me waitin' fer hours; bum job, too. Half a buck fer smokes—he tunes 'er up swell. Wotta racket!"

W'at, mister, get outa Noo Yawk? T'ink I'm crazy? Leave all dis 'citement? I gotta swell job. Don't go to work 'til four. Swell shift—get da five o'clock runs, den a rest for coffee, den show crowds till eight-t'uity or so, den a let-up, den da same suckers lookin' fer a night club where dey rims 'er pockets fer 'em, den mebbe a drunk er two before I quit—an dey's good pickin's, too.

Sure, it's a swell job fer a guy like me witout eddication, but we got lots of collitch guys drivin' cabs, too. Da dough's good an' dat's more'n dey can say about all dat eddication stuff.

An' say, mister, dis'll cost me somet'in' on da meter, but if ya wanna dodge dis tieup an save a lotta time, get out now and beat it t'rough dat passageway. T'anks. G'wan, I'll shutta door!"

* Abstracted from "Life and Times of Rembrandt" by Hendrik Van Loon, Liveright Publishing Corporation, New York. Canadian agent, Smithers and Bonelli, Toronto.

AT HOME OR AWAY

SPOT TESTS

SIMPLIFY URINALYSIS

NO TEST TUBES • NO MEASURING • NO BOILING

Diabetics welcome "Spot Tests", (ready to use dry reagents), because of the ease and simplicity in using. No test tubes, no boiling, no measuring; just a little powder, a little urine—color reaction occurs at once if sugar or acetone is present.

Galatest

FOR DETECTION OF SUGAR IN THE URINE

Acetone Test (Denco)

FOR DETECTION OF ACETONE IN THE URINE

SAME SIMPLE TECHNIQUE FOR BOTH

1. A LITTLE POWDER

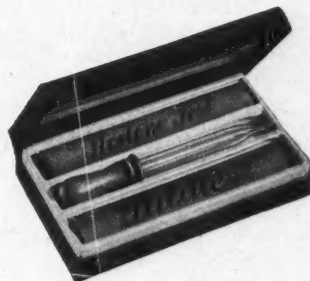


2. A LITTLE URINE

COLOR REACTION IMMEDIATELY

Accepted for advertising in the Journal of the A.M.A.

Write for descriptive literature



A carrying case containing one vial of Acetone Test (Denco) and one vial of Galatest is now available. This is very convenient for the medical bag or for the diabetic patient. The case also contains a medicine dropper and a Galatest color chart. This handy kit or refills of Acetone Test (Denco) and Galatest are obtainable at all prescription pharmacies and surgical supply houses

THE DENVER CHEMICAL MANUFACTURING COMPANY

286 St. Paul Street, W., Montreal

MODERN HOSPITAL ELEVATORS

TURNBULL
ENGINEERED
FOR
SAFETY
DEPENDABILITY
UTILITY

FEATURING

ENGINEERING
AND DESIGN
EXCLUSIVELY

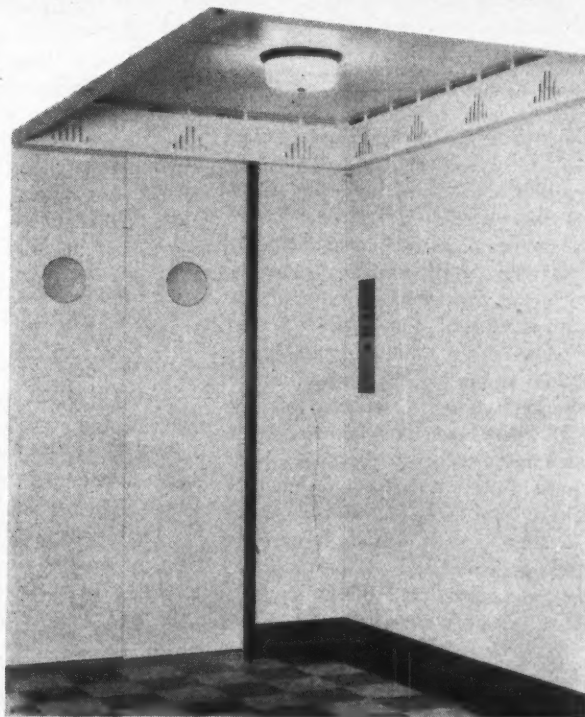
TURNBULL ELEVATOR

COMPANY LIMITED

126 JOHN ST., TORONTO, ONT.

— An All-Canadian Company —

BRANCH OFFICES AND AGENCIES FROM COAST TO COAST



"Cross the Threshold of a Turnbull Elevator in Safety."

◀ Provincial Notes ▶

Nova Scotia

DIGBY. Miss Margaret Graham, Reg.N., has been appointed superintendent of the Digby General Hospital. Formerly of Soldiers' Memorial Hospital, Middleton, Miss Graham took up her new duties at Digby in January. Miss Bernice Abramson, operating room nurse, was acting superintendent of the hospital following the resignation of Miss Elsie Yetman last year.

* * * *

SHELburne. One of the major events in this town during the year 1946 was the opening of its first general hospital, including two wards for the treatment of Nova Scotia tubercular patients. The hospital is housed in a building taken over from the Navy. It has accommodation for 50 general patients and 100 tubercular cases.

New Brunswick

MONCTON. New Brunswick's fifth hospital for tuberculosis patients has been officially opened here, under the direction of Dr. Perry M. Knox. The former Air Force hospital forms another link in the chain of sanatoria which the provincial department of health is forging in an effort to stamp out tuberculosis. The Moncton Sanatorium is one of the largest in the province, having a capacity of 200 beds. There are four 32-bed wards and a number of smaller ones with five or fewer beds. In conjunction with the Jordan Memorial Hospital at River Glade, it will serve patients from Westmorland, Albert, Kent, Northumberland and Kings County.

* * * *

STANLEY. Citizens of this town have taken the initial steps for the establishment of a 15-bed community

hospital to serve its needs and those of the surrounding district. A provisional directorate has been appointed and Stanley Memorial Hospital Limited has been incorporated. Almost \$15,000 has already been subscribed by citizens and a residence selected as the site of the new hospital.

Quebec

MONTREAL. Dr. Gaston Gosselin has been appointed to the position of medical director at Hotel Dieu de Montreal.

* * * *

SHAWVILLE. The board of directors of the Pontiac Community Hospital have instructed Abra and Balharrie, Ottawa architects, to enter into a contract with the Thomas Fuller Construction Company of that city for construction of the \$350,000 superstructure of a new Pontiac hospital. It is expected that the total cost, including equipment, will be about \$400,000. The new building will have a 156-foot frontage with a continuous line of windows on each of the two floors. There will be a special solarium on the flat roof for the use of the staff.

* * * *

VAL D'OR. Construction of a 50-bed hospital at a cost of about \$375,000 in Val d'Or during 1947 has been announced by the Bishop of Amos. The hospital, to be known as St. Sauveur's will become the property of and be administered by the Congregation of the Filles de la Sagesse, who also administer Hôpital Ste. Justine in Montreal. A provincial grant of \$175,000 has been made available for this project; \$75,000 will be contributed by the Order and the remainder is to be contributed by the mines and com-

munities which will benefit by the operation of the institution.

Ontario

BANCROFT. Hastings County Council has sanctioned a grant of \$26,500 to the building fund for the new Bancroft Red Cross Hospital. The amount will be spread over three annual payments. The over-all cost of the proposed 20-bed institution is estimated at \$120,000. The provincial government and the Ontario Division of the Red Cross will provide grants of \$40,000 each and the remainder is to be raised by the community.

* * * *

GLOUCESTER. On behalf of the Roman Catholic Episcopal Corporation, Wilfred Beauchamp, recently advised the Gloucester Township Council that a six-storey maternity hospital and a six-storey seminary will be constructed on the Robinson estate in the Hurdman's Bridge district. It is expected that work on this project will begin in the spring.

* * * *

HAMILTON. Work has begun on a new 50-bed pavilion at the Hamilton General Hospital. This structure is to be situated on the north-east corner of the hospital grounds and will have concrete walls and floors. It is expected that construction will be completed by early spring and that the necessary equipment will be available before that time.

* * * *

STRATFORD. The Hospital Trust in this city has announced that space for 16 additional beds will be provided at the Stratford General Hospital by closing in two verandahs at the south-east corners of the main and second floors. Architects are preparing drawings for this renovation and it is believed by members of the Trust that 16 more beds will help to reduce the hospital's waiting list in the immediate future.

(Concluded on page 66)

STREPTOMYCIN

For Rapid Control of Gram-negative Infections

ACTION

- Bacteriostatic and bactericidal effect against a wide range of gram-negative organisms.
- Should be administered in full dosage to bring infection under control rapidly.
- May be given in conjunction with other chemotherapy.
- Effectiveness in urinary tract infections increased by alkalinizing the urine.

DOSAGE

- For systemic effect, 0.2 Gm. to 0.5 Gm. every four hours, intramuscularly.
- To diminish bacterial content of gastrointestinal tract, 0.2 Gm. to 0.5 Gm. every four hours orally.
- For topical use, 0.05 Gm. per 100 cc. water or saline (for optimum effectiveness should be buffered to pH 7.5 to 8.5).

INDICATIONS

For short-term use (average 2 to 14 days):

- Urinary tract infections due to gram-negative organisms.
- Infections due to susceptible strains of *Escherichia coli*, *Proteus vulgaris*, *Aerobacter aerogenes*, *Salmonella*.
- Preoperatively and postoperatively in abdominal operations.
- Surgical wounds infected with gram-negative organisms.

- Klebsiella pneumoniae* (Friedländer's bacillus) infections.
- Hemophilus influenzae* infections.
- Tularemia.

For long-term use (1 to 6 months):

- Tuberculosis, in selected cases.
- Bacteremia and endocarditis due to streptomycin sensitive organisms.

Complete directions for use are enclosed in each carton of Streptomycin Merck



STREPTOMYCIN MERCK

(Hydrochloride)

MADE IN CANADA

MERCK & CO. LIMITED

Manufacturing Chemists

MONTREAL

TORONTO

VALLEYFIELD



Provincial Notes

(Concluded from page 64)

TORONTO. As part of a program to relieve over-crowding in Toronto hospitals, the Civic Welfare Committee has recommended a 200-bed addition to the Runnymede Hospital for the chronically ill. The hospital, which is city-owned, now accommodates 130 patients, 125 of whom are indigent.

* * * *

WINDSOR. It is expected that construction will begin in the early spring on a new nurses' residence at Grace Hospital here. According to plans worked out last year, the building will accommodate 120 nurses.

* * * *

WINDSOR. It has been announced that plans are being prepared for the construction of a new wing at the Metropolitan. The addition will form a "T" at the west end of the present structure. Besides providing accommodation for about 200 patients, the proposed wing will contain the x-ray department, including a deep therapy machine, and laboratories. These will be conveniently near to the operating suite on the corresponding floor of the old building. The psychopathic department will be on the first floor of the new building and quite segregated from the rest of the hospital.

Manitoba

WINNIPEG. At the inaugural meeting of the Municipal Hospital Commission, Mr. Peter Cornes was elected Chairman for the year 1947. Alderman Hilda Hesson assumes the Vice-chairmanship. Other members of the Commission are: Mr. A. J. Roberts, Alderman James Black and Alderman F. L. Chester.

Saskatchewan

LEOVILLE. A new Union Hospital was officially opened in this village in November of last year. The building, with a capacity of 22 beds, has a modern heating system and most up-to-date equipment. The hospital

is operated by the Saskatchewan section of the Red Cross Society under the Red Cross Outpost Hospital Scheme.

* * * *

MOOSE JAW. The former Children's Shelter on South Hill is to be turned over to the Hospital Board for use as an extension to the General Hospital. Total cost of the proposed alterations is expected to approximate \$28,000 and will involve interior decorating, overhauling the heating system and installing an elevator. The new extension, which will accommodate 45 patients, is expected to be ready for use early in the spring.

* * * *

REGINA. The Board of the Regina General Hospital has approved the inclusion of the psychopathic wards as a department of the hospital. Hitherto these wards have been serviced by the hospital but medical men appointed by the provincial government have been in charge. When the contract between the Government and the hospital expired recently, revision of the arrangement was requested. The new system would remove any distinction between psychopathic patients and others; it would allow doctors to treat their own psychopathic patients in the wards and encourage psychiatrists to set up practice in the city.

* * * *

REGINA. Dr. Donald Griffith McKerracher of Toronto has been appointed provincial psychiatrist and commissioner of mental services for Saskatchewan. Premier Douglas, Minister of Health, in making the announcement, said that the new commissioner would give "distinguished leadership to our new mental-health program".

Prior to the war Dr. McKerracher was employed by the Ontario Department of Health as director of mental health for eastern Ontario counties. He enlisted in the armed forces, becoming senior psychiatrist for M.D. 2 where he organized the district psychiatric services. Upon discharge, following overseas service, Dr. Mc-

Kerracher joined the staff of Toronto Psychiatric Hospital, a post he held prior to his acceptance of the Saskatchewan appointment.

* * * *

YORKTON. Efforts are being made to secure the necessary equipment and supplies for the purpose of re-opening the hospital building at the airport here as an auxiliary to the Yorkton General Hospital. As soon as it is ready, about 20 old-age patients will be moved to the new quarters.

British Columbia

ALERT BAY. St. George's Hospital, one of the three hospitals hitherto operated by the Columbia Coast Mission, came under new management on January 1st when the St. George's Hospital Society assumed control. The Society, which represents the larger logging interests in the Alert Bay area, owes its birth to the need for more up-to-date and more extensive hospital service in the area. The logging companies are willing to assume the larger financial burden which this will entail and the Mission agreed, with the guarantee that medical services would be provided to both Indians and whites. The hospital and property have not been sold but only leased to the new Society.

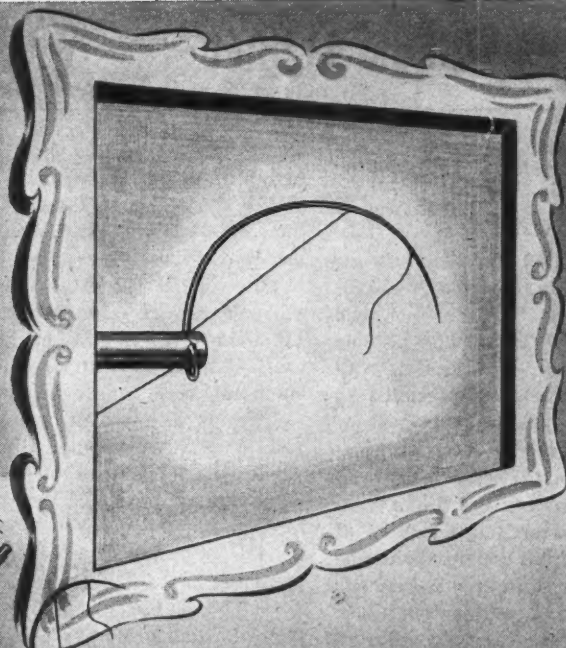
* * * *

BURNABY. A campaign for funds to build a hospital here has met with strong public support. Those workers who have given their time to the project have realized their first objective and a sum of \$100,000 is now available.

* * * *

NEW WESTMINSTER. Failure to obtain a by-law for further funds to meet the estimated cost of the proposed new 200-bed wing and a nurses' residence has made it necessary for the Board of the Royal Columbian Hospital to revise its plans. It has been decided to omit the residence and proceed with construction of a six-storey main wing early this year.

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◀ Book Reviews ▶

BANTING'S MIRACLE By Seale Harris, M.D., with a Foreword by Elliott P. Joslin, M.D. Pp. 233. Illustrated. Price, \$3.50. J. M. Dent & Sons (Canada) Ltd. 1946.

It is fitting that this story of Sir Frederick Banting and his great discovery should be told by one who knew him so well and who, as one of America's senior and leading consultants in diabetes, appreciated to an unusual degree the importance of this great medical advance.

But it is not the discovery of insulin alone which makes this a compelling book. Here is the story of a young man from the farm, shy and retiring, but with insatiable curiosity and unlimited determination, who conceives a great idea in physiological research and carries his idea through to a brilliant and successful end. To many readers there will be an especial appeal in that Banting's upbringing, his youthful perplexities and decisions and his war experiences may not have been dissimilar to their own. Moreover, the extreme modesty of this international figure, his avoidance of publicity, his dislike of sham, his great loyalty to his friends, his enthusiastic interest in his avocations, his pride in the success of his assistants—all add tremendously to the stature of the subject.

These and other facets of Sir Frederick's character are well brought out in this volume, a work that indicates much understanding by the author. His handling of the unfortunate controversy with Prof. J. J. R. Macleod over the latter's assumption of a major share of the credit is dealt with expeditiously but with clarity. The steps leading to the discovery of insulin as a result of the collaboration of Best, Collip and others are told in simple language, as are the many other fields of research followed at the Banting Institute and at Ottawa. Readers, who have not had the opportunity of keeping in close touch with the continuous flow of research at the Banting Institute and of studies being conducted by the National Research Council of Canada, (of whose Medical Section he was chairman), will find a refreshing review of many of the

studies undertaken by Banting and his group in the twenties and thirties and of some, though far from all, of the special studies undertaken during the War.

The volume is not as exhaustive as *Sir Frederick Banting*, written by Dr. Lloyd Stevenson of London, Ontario, (pp. 440) and published at about the same time. The latter has written as a historian, going more fully into a wide range of details, whereas Dr. Harris wrote primarily as an intimate friend, reviewing the highlights of his career and stressing his fine personal qualities. From the point of view of many readers, this shorter and less extensively documented volume may not have lost through the omission of some detail chiefly of historic value.

* * * *

TABLE OF FOOD VALUES RECOMMENDED FOR USE IN CANADA. By the Nutrition Division, Department of National Health and Welfare, Ottawa. Pp. 183. 1946.

This new volume on food values is now available to professional people without charge from the Nutrition Division of the Department of National Health and Welfare, Ottawa.

This excellent compilation was made by the staff of the Nutrition Division with assistance from sub-committees and members of the Committee on Food Analyses of the Canadian Council on Nutrition. Values are the results of many investigations and analyses made in Canadian universities and in government and other laboratories and are based in part upon information made available by the United States National Research Council and the Bureau of Human Nutrition and Home Economics of the U.S. Department of Agriculture.

By means of half-pages, it extends the analyses to cover not only calories, PFC values and minerals content, but also the values for vitamin A, thiamine, riboflavin, niacin and vitamin C. Waste and moisture percentage are noted, both grams and ounces are recorded and the common measures are given. An appen-

dix listing the nutrient losses in cooking should be of value. Unfortunately the loose leaf binding is too small for the number of pages and may require frequent adjustment.

* * * *

BODY MECHANICS IN NURSING ARTS. By Bernice Fash, Instructor in Physical Education, Cook County School of Nursing, Chicago, Ill., with a Foreword by Lucile Petry, Editor Advisor for McGraw-Hill Series in Nursing. Pp. 180. Illust. Price \$2.75 (U.S.). The McGraw-Hill Book Company, 330 West 42nd Street, New York 18, N.Y. 1946.

Primarily intended for, and dedicated to the use of nurses, this little volume presents an entirely new approach to the problem of utilization of energy, not only by nurses, but by those in offices and factories. In an easy, non-technical manner basic laws of physics are utilized practically to apply to physical activities inherent in nursing practice, business and industry.

The book is divided into sections, each an experiment in efficiency of movement calculated to impress upon the student that the study of body mechanics in nursing makes practical the transfer of the good body mechanics learned in her nursing practice to the accurate performance of nursing procedure as taught in her school of nursing. This is a manual incorporating the good mechanical use of the body in carrying out work procedures; in terms of examples in the first section, showing how the principles are utilized and, in the second section, specific problems of physical activities and the improvement of procedures through the application of the principles. This little book could easily become a work manual for student nurses, office and plant workers in its easy presentation of how the wise expenditure of energy results in beautifully co-ordinated movements, which, in turn, achieve equilibrium and balance in terms of personality, poise and assurance.

* * * *

WEAVING IS FUN. Written and published by Lou Tate, the Little Loomhouse Group, Kenwood Hill, Louisville 8, Ky. Pp. 64. Price \$2.00 (U.S.). 1946.

This instructional manual for handweaving is the result of detailed experimental work to ascertain what

(Concluded on page 72)

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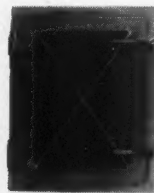


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Michigan Survey

(Concluded from page 56)

maintain effective patient service and to remain within the limits of efficient and economic operation".

It is also recommended that hospitals of 50 to 100 beds establish working relations with larger hospitals in order that the services of consultants in the medical specialties may be readily available, that means for ready reference of patients requiring special services not available in the small hospital may be established, and that advice and assistance in administrative matters may be obtained.

Vital Statistics

A major section of the report deals with vital and other statistics related to hospital needs. Social, economic and geographic factors are considered at some length and many valuable tables and charts are furnished. The present availability of physicians and nurses to the population in each county is carefully analyzed, as well as the extent and type of hospital facilities. This selection of material for study should be of great assistance to any of our provincial governments or hospital association committees interested in making a comparable study in this country.

Estimating Hospital Needs

Based upon a study of the data outlined in the report, four classes of general hospitals and medical service centres have been designated.

- (a) medical centres;
- (b) regional hospital centres;
- (c) community hospital centres;
- (d) community health centres.

These are all to be co-ordinated in order to provide an integrated statewide service. Medical centres are Ann Arbor and Detroit, these being the centres of medical education for the state. Regional hospital centres are to serve as focal points for co-ordinating the service over several counties. They should have one or more hospitals of at least 200 beds. Community hospital centres are those needing hospitals of 50 or more beds. Finally, a few small rural communities have been recommended as community health centres. They are intended to be something more than an outpost emergency station but

less than a fully-equipped modern hospital.

In working out these areas, county lines were not necessarily followed, as it was felt desirable that the natural movement of population in the direction of trading and marketing centres should determine the location of hospitals. It was realized that this may complicate the problem of providing county funds for hospitals but did not constitute an impassable barrier as funds could be allocated to a hospital on the basis of the proportion of patients coming from the county providing that payment. This plan of future expansion and relationship is illustrated with charts.

Estimation of Beds Needed

Estimates are submitted of the number of occupied beds needed, which is equivalent to the more common term "average daily census". An occupied bed may be defined as 365 days of hospital service. The number of occupied beds needed should be calculated before working out total beds, as this is the more important factor.

The formula for estimating the number of occupied beds needed for 1,000 population is a simple one. For each birth in the community, it is estimated that 11 days of hospital care, or .03 of a bed per year, will be needed, and it is assumed that all births should be hospitalized. Each hospital death is associated with a certain amount of hospital care, and this has been found to be 250 days of hospital care, a figure which is valid for all types of cases including obstetrics. If obstetrical cases are excluded it becomes 219 days. When patient days are converted into occupied days, it may be said that each hospital death calls for .60 of an occupied bed as compared with .03 in the case of births.

As not all deaths by any means occur in hospitals, it is estimated that 50 per cent would occur if there were ample accommodation available. The number of occupied beds needed per 1,000 population is equal to .6 of 50 per cent of the death rate, plus .03 of the birth rate. The total number of occupied beds needed for each community is obtained by multiplying the need rate by the population expressed in thousands.

The difference between this figure and the existing number of beds would have to be modified, of course, because of the fact that in all probability many of the existing beds would be in buildings obsolete or otherwise not desirable for hospital use. Some would be poorly located, and other sites should be made available.

The study was made under the general direction of Thomas S. Gates of the University of Pennsylvania, chairman of the Commission on Hospital Care; Eugene B. Elliott, Lansing, chairman of the Michigan Hospital Survey Committee; with Dr. A. C. Bachmeyer of Chicago, Director of Study; Maurice J. Norby, Associate Director; Dr. D. B. Wilson, Assistant Director, and C. H. Hamilton, Ph.D., Director of Sociological Studies. The report has been published by the W. K. Kellogg Foundation of Battle Creek, Michigan, to which Foundation Mr. Graham Davis is hospital consultant.

A.C.S. Point Rating System

(Concluded from page 47)

of the pre-anaesthetic examination, the follow-up and the measures taken to avoid explosion and fire hazards. The other departments mentioned are analyzed and graded according to those details of most importance to the welfare of the patient.

Obviously the items selected and the points allocated vary from those which would be emphasized in arranging a basis for the payment of hospitals. The proposal met with considerable approval when presented at Cleveland.

The values presently assigned to some of the items listed were questioned, but these will be thoroughly reviewed by Dr. MacEachern and his associates before the Board is asked to give official approval.

Chief Supervisor of Nurses Appointed

Miss Dorothy M. Percy of Ottawa, a former matron of the Royal Canadian Army Medical Corps, has been appointed chief supervisor of nurses in the civil service health division, according to an announcement from the Department of National Health and Welfare.

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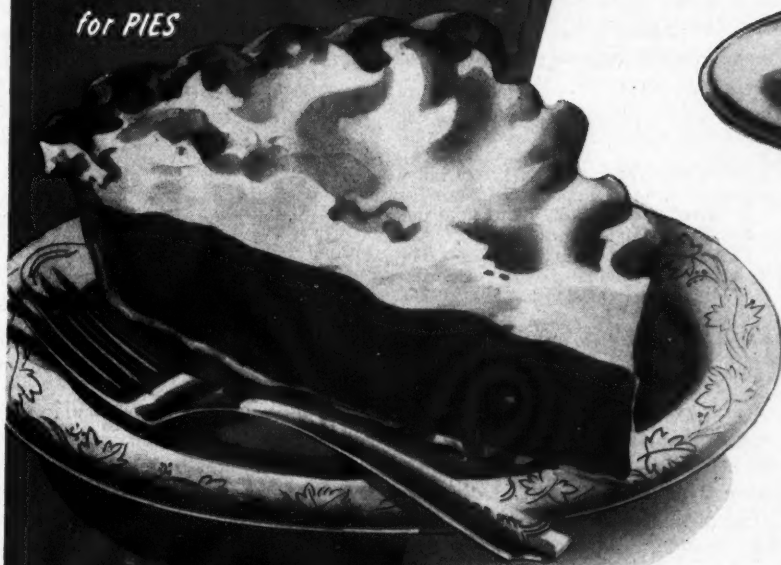
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Book Reviews

(Concluded from page 68)

most interests the new weaver and what she can learn most readily. It has been compiled with special thought for bed patients and diversional angles are stressed. The author has outlined the basic principle of each technique so that the beginner will acquire the knowledge necessary to develop his or her own creative ability. All instructions are for fully functional textiles. While designed especially for the beginner, the book has also much to offer to the experienced weaver.

The volume is profusely illustrated. The first 18 pages have diagrams of the parts of a loom and the various techniques are explained with the aid of pictures. The latter part of the book deals with design and materials, patterns being clearly drawn to scale.

The text emphasises the thought that weaving is a sociable hobby and that each weaver gains by sharing her knowledge with a newcomer. For this reason and because of the lucidity with which the weaver is led from the simplest techniques to elaborate and original design, this book would seem to be a most valuable one for hospital patients. It can well be recommended for use in occupational therapy centres and departments.

* * * *

A HISTORY OF NURSING. By Gladys Sellew, Ph.D., Reg.N., Director of Nursing, College of St. Catherine, St. Paul, Minn., and C. J. Nuesse, Ph.D., Instructor in Sociology, The Catholic University of America, Washington, D.C. Pp. 444, illust. Price \$4.00. The C. V. Mosby Company, St. Louis, Mo. Canadian Agents: McInsh & Co. Limited, Toronto. 1946.

This volume has compressed an amazing amount of information into its 400-odd pages. Indeed, if we have a fault to find it is that the reader is left somewhat confused by the bewildering array of facts, names and dates which has been presented to him. The authors have taken the stand that the history of nursing as such is so inextricably bound up with the history of medicine and health care in general that the whole field must be covered. And covered it they have—exhaustively if, of necessity, somewhat baldly.

The most interesting section of the book lies in the later chapters, which

contain a thoughtful appraisal of the problems facing nursing today. Although the United States naturally forms the locale, the similarities between the States and Canada—comparative newness, alternations between overcrowded cities and sparsely-settled rural communities, and a fairly high percentage of inhabitants of foreign birth or extraction—make the section equally applicable to our own situation. The comments here, although brief, are succinct and thought-provoking.

* * * *

HEALTH INSURANCE IN THE UNITED STATES. By Dr. Nathan Sinai, Dr. P. H. Odin W. Anderson, Melvin L. Dollar, School of Public Health, University of Michigan. Pp. 115. Price \$1.50. The Commonwealth Fund, 41 East 57th Street, New York, N.Y. 1946.

This factual monograph by Dr. Sinai and his associates is another in the objective series on medical care in the United States issued by the New York Academy of Medicine Committee on Medicine and the Changing Order, and deals with the issues and problems in the administration of health insurance plans. The history of medical insurance in the United States as traced by the authors closely parallels the development of our own health insurance through government and private effort. Since no experience is available through compulsory medical insurance, except workmen's compensation, which is hardly comparable, the difficulties of medical care under a national system of compulsory medical insurance could only be surmised, it was pointed out. In summing up the essence of the attempt to deal exclusively with voluntary medical insurance, due to the fact that experience has so far been confined to voluntary programs of medical care, the monograph concludes that, until leaders of government, of labour and of industry begin to appreciate the importance of the service problem involved in providing comprehensive medical care under any system of prepayment, the progress will be difficult and slow.

Mental illness is today's major problem; if not solved adequately it will be tomorrow's greatest tragedy.

—Leo M. Lyons, Chicago.

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1. Bunn, P. A.: In *Conferences on Therapy*; New York State J. Med. 46:527 (March 1) 1946. 2. György, P.; Evans, K. W.; Rose, E. K.; Parlingiero, J. G., and Elias, W. F.: *Pennsylvania M. J.* 49:409 (Jan.) 1946.

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Correspondence

"Observer" Upheld

To the Editor:

"Observer" must have been incensed over the injustices to nurse-superintendents to write such a vituperative letter, but at that I feel many superintendents will be grateful for this little bit of understanding.

I, personally, am in a position to know what she means. A secretary-treasurer, who usually has had to depend on the nurse-superintendent for advice and training, in a very short time assumes an unjustifiable authority out of all proportion to his position. I assert that it is the duty of the nurse-superintendent to prevent this, even at the expense of being considered autocratic—that is, if she is sufficiently interested in the welfare of the personnel and the hospital as a whole.

To sum up, if the secretary-treasurer minds his own business and

does not expect the nurse-superintendent to take over his duties too frequently, I think there should be little or no question of "dual control".

—*"Former Nurse-Superintendent"*

Supply of Physicians Increasing in Canada

With the release of hundreds of doctors from the armed forces following the war and with the expected new high in the peace-time output of medical graduates from Canadian universities, this country may become one of the best supplied nations in the world as far as doctors are concerned.

This is disclosed in a recent report of a research committee of the Department of National Health and Welfare. It is emphasized, however, that many factors will determine whether or not this anticipated growth in membership of the medical profession may be considered adequate to meet the presently increasing demand for medical services.

The report discloses that for forty years, 1901 to 1941, there was practically no change in the number of

physicians in relation to the population of the country but that a substantial increase in the relative number of doctors may be expected in the next few years to serve the ever-growing population. The ratio of persons per physician was 970 in 1901, 1,072 in 1941 and 1,017 in 1946, the doctors in the armed services not being accounted for in the 1941 and 1946 figures. The committee estimates that a ratio as low as 854 persons per physician may be reached by 1951.

A comparison with a number of selected countries shows that Canada is well up on the list as far as the supply of doctors is concerned at this time. Latest figures available show Sweden to be the most abundantly supplied, with only 723 persons per physician.

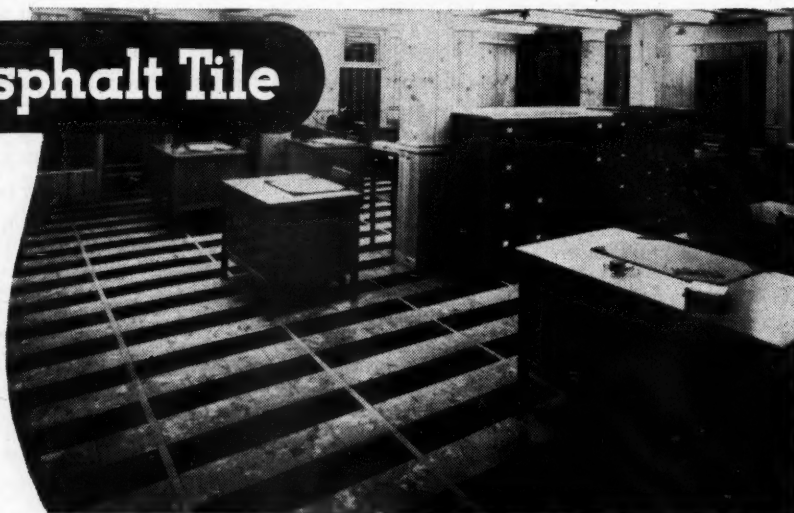
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Payments Worked Out Under Saskatchewan Plan

The Saskatchewan Hospital Association and the Department of Public Health have worked out an agreement for the payment of hospitals under the "point system" adopted in connection with the new legislation effective January 1st providing hospital care for all residents of the province.

Public hospitals will be paid at a rate of 6.5 mills per point for the first ten days of the patient's stay; for the second ten days payment will be at the rate of 6 mills per point; and at the rate of 5.5 mills per point from the 21st day on. This appears to be a very happy solution in that higher rates of pay are effective for the patient staying only a short time in the hospital—the most expensive period—and the rates diminish with the length of stay. This plan does not encourage unnecessary retention of patients in hospital.

Dr. C. J. Kirk, director of hospital planning and administration, states that it is still too early to forecast the eventual success of the plan

and that there are still a number of problems to be ironed out. The hospital association is co-operating with the government in every way and Dr. Kirk notes that there is a keen interest on the part of the hospitals to increase their number of points under the system of classification. In the light of later experience it will be fairly easy to revise point values, should that seem advisable.

A.H.A. Names Acting Director of Blue Cross Commission

At a meeting of the Blue Cross Commission of the American Hospital Association in December, Richard M. Jones, Public Relations Director of the Commission since

1945, was named acting director. He will serve in this capacity until a permanent director is named to succeed C. Rufus Rorem who resigned to assume the directorship of the Philadelphia Hospital Council.

QUALIFIED ANAESTHETIST

to have charge of Department of Anaesthesiology, 135 bed Children's Hospital. In reply please state experience and degrees held. Salary to be arranged. Apply to: Superintendent, The Children's Hospital of Winnipeg, Winnipeg, Manitoba.

Coming Conventions

March 17-21—A.H.A. Institute for Record Librarians, Benjamin Franklin Hotel, Philadelphia.

March 24-28—A.H.A. Institute for Accounting Executives, New York City.

April 14-18—A.H.A. Institute on Basic Accounting and Business Office Procedures, Chicago.

June 23-27—Canadian Medical Association, Royal Alexandra Hotel, Winnipeg.

September 22-25—American Hospital Association, St. Louis, Mo.

Week of October 20—Alberta Institute on Administration, Edmonton.

October 25—Associated Hospitals of Alberta, Edmonton.

Week of October 27—British Columbia Hospitals Association, Victoria.

November 3-5—Ontario Hospital Association, Royal York Hotel, Toronto.

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BCG Vaccination

(Concluded from page 31)

6.7 times its own probable error. The ratio is 1:5.03.

There was one death from tuberculosis in this sanatoria study, which occurred in the non-vaccinated negative group.

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The incidence of infection in the nurses' group was 71.8 per cent after one year's exposure; this is practically the same rate obtaining in the Manitoba Sanatorium and St. Boniface Sanatorium, where the incidence of infection for these groups after one year's exposure was 71.5 per cent and 79.7 per cent respectively, during the same period.

Findings: Among 203 vaccinated nurses, 5 developed manifest tuberculosis, or 2.46 per cent; among 113 non-vaccinated negative nurses, 18 developed manifest tuberculosis, or 15.9 per cent; among 293 nurses positive to tuberculin, 11 developed manifest tuberculosis, or 3.75 per cent. The difference in percentages between the vaccinated nurses and non-vaccinated negative nurses is 13.44 per cent, which is 5.5 times its own probable error and therefore of statistical significance. The ratio is 1:6.5.

Conclusions

1. BCG vaccination of nurses negative to tuberculin on entrance to a general hospital environment, where the rate of infection was approximately 12 per cent *per annum* among the non-vaccinated negatives, and the duration of exposure was 2.42 years, reduced the number of cases of manifest tuberculosis that developed among this group to its fourth; the ratio of vaccinated negatives as compared with non-vaccinated negatives is 1:4.27.

2. BCG vaccination of Saskatchewan sanatoria employees negative to tuberculin on entrance to the sanatorium environment, where the rate of infection among the non-vaccinated negatives was 60 per cent during the first year of exposure, and the duration of exposure was 1.44 years, reduced the number of cases of manifest tuberculosis that developed among this group to its fifth; the ratio of vaccinated negatives as

compared with non-vaccinated negatives is 1:5.03.

3. These findings are of statistical significance.

4. BCG is not a 100 per cent effective prophylactic; its protection is very considerable, but by no means absolute.

5. BCG vaccination was found to be safe.

6. Regarding the severity of manifest tuberculosis developed among the vaccinated as compared with the non-vaccinated negatives, it was found that in the vaccinated group the lesions were less extensive.

7. The serious situation that had been developing with regard to excessive incidence of tuberculosis among nurses and sanatoria employees who did not react to tuberculin on entering the environment, during the period 1930 to 1938, has not been present since vaccination of negative reactors was begun in September, 1938. The nursing schools and the League in Saskatchewan no longer have anxiety and worry with regard to excessive tuberculosis developing among their negatively-reacting staff.

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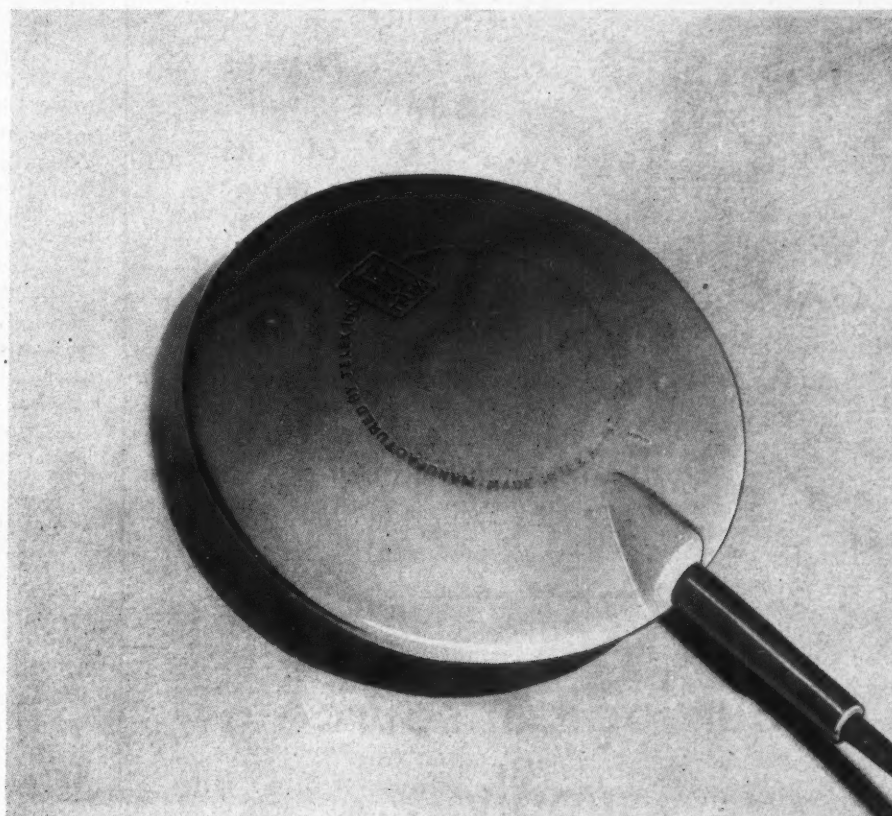
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Notes from Newfoundland

ST. JOHN'S. In an address given at the recent official opening of the new sanatorium here, His Excellency, the Governor of Newfoundland, outlined the "real and substantial progress" made by the colony's Health Service in the past decade. He reminded his audience that 12 years ago there was no such thing in Newfoundland as a cottage hospital while today there are 14. His Excellency stated that in the last year over 5,000 patients had entered these hospitals for indoor treatment and many more thousands had been treated as out-patients. He also noted that Newfoundland now has 25 Nursing Districts, each supervised by a nurse. Tribute was paid to the doctors and nurses who serve their country in its more isolated sections and to the work of the Tuberculosis Association of Newfoundland which, with the co-operation of the public, is making a determined effort to stamp out the high incidence of that disease.

The new Sanatorium, on Topsail Road, was built by the British Admiralty and deeded to the Newfoundland Government after the War. The building has accommodation for 350 patients and this, in conjunction with the old sanatorium, makes a total of 500 beds now available for the treatment of tuberculosis.

* * * *

CORNER BROOK. It is expected that work will begin on the new Western Memorial Hospital early in the spring. Architects' plans call for a 104-bed institution, three storeys high, which will be constructed at an approximate cost of \$750,000. The main structure will measure 210 by 45 feet, with an 80 by 50 foot wing at the rear, and will be fire-proof throughout.

* * * *

GANDER. According to a proposal of the Newfoundland Health Service, Banting Memorial Hospital, which now has forty beds, will be further extended in the near future. This hospital is subject to many special calls upon its facilities because of the tremendous volume of air passenger traffic which passes the vicinity. It also serves nearly 3,000 personnel attached to the airport as well as residents of the surrounding area.

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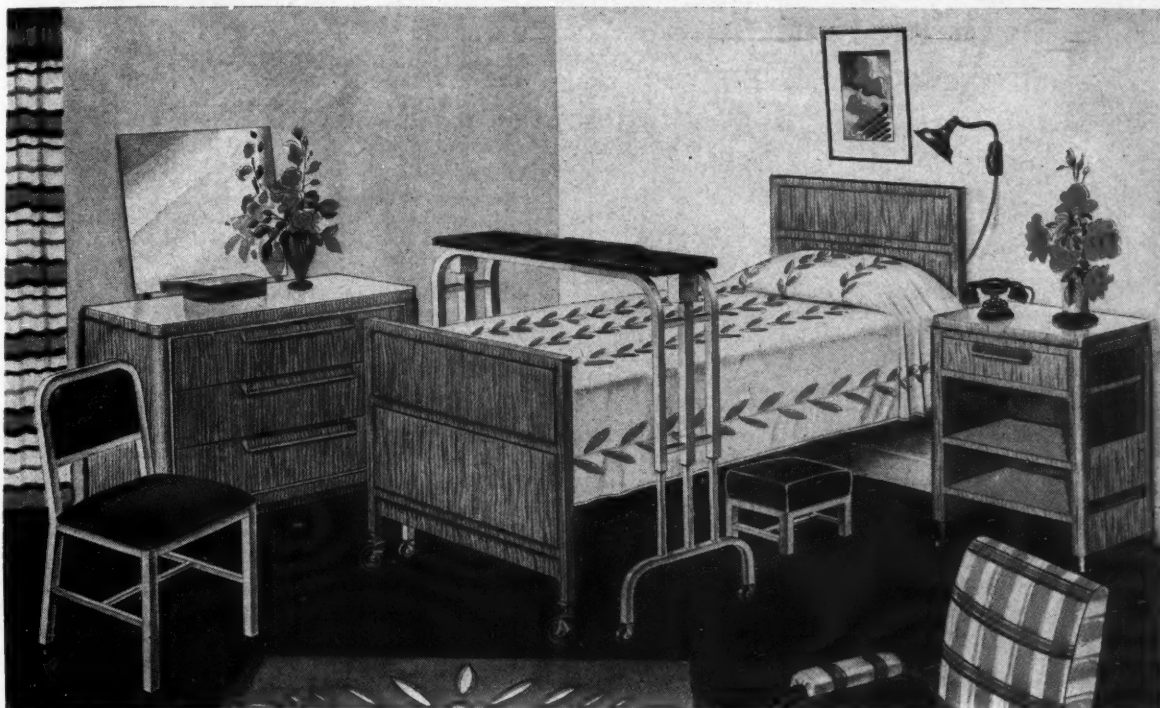
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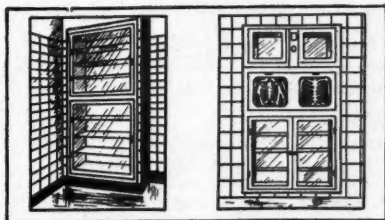
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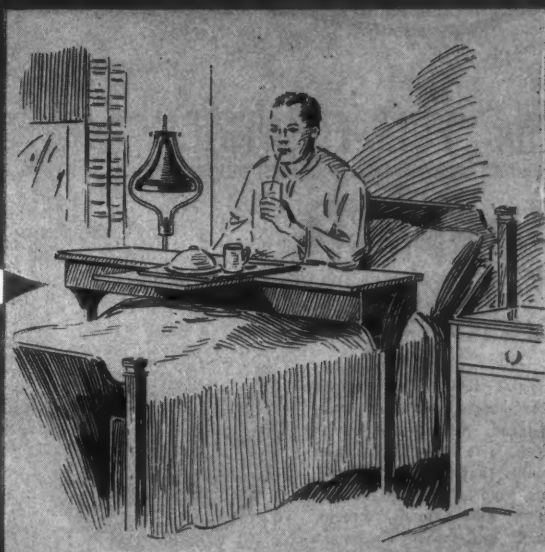
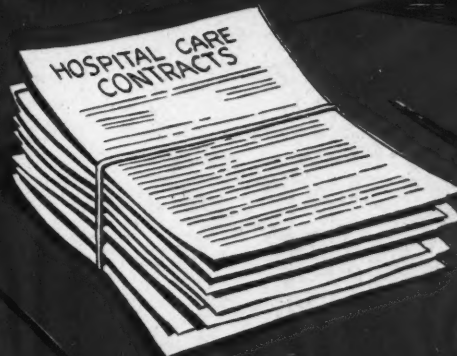
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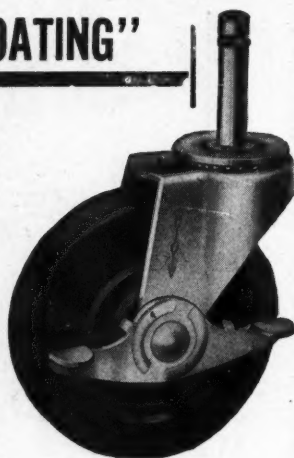
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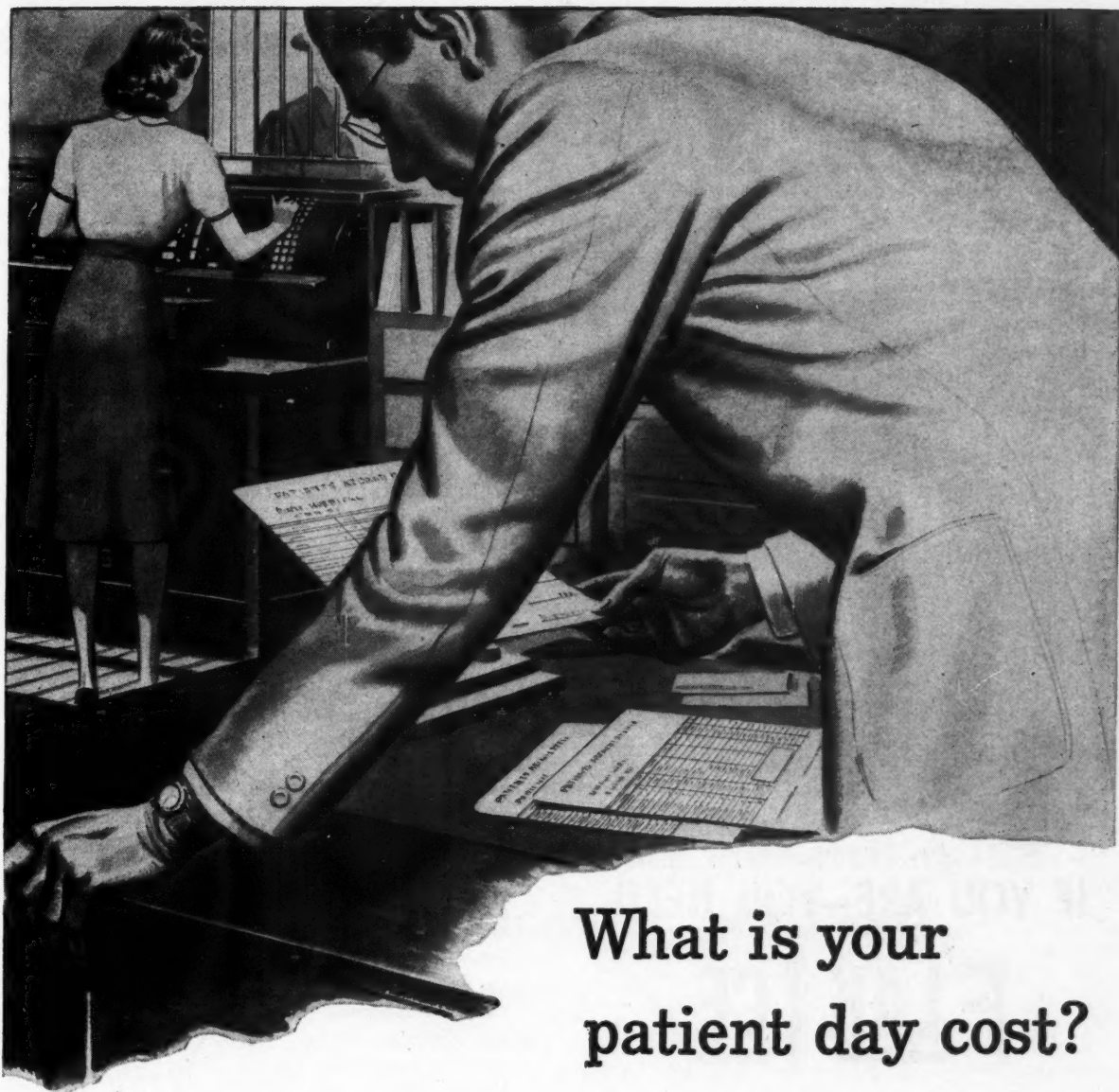
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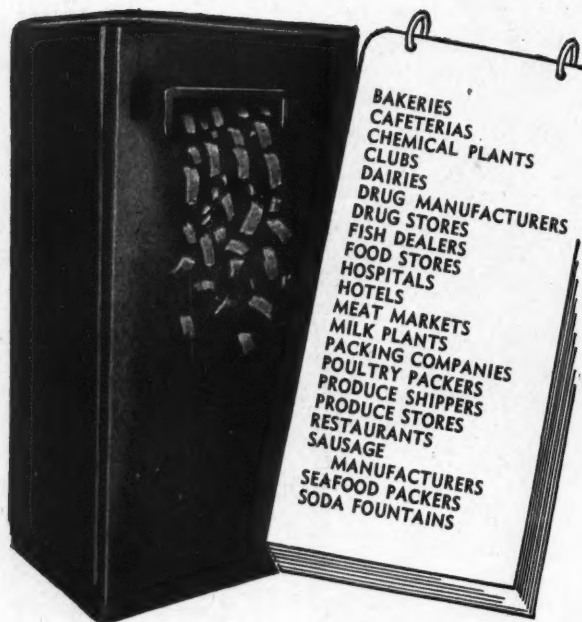
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S. H. Newman Co., Ltd., Toronto.
Wrought Iron Range Co. Ltd., Toronto.

20 MINUTE MIRACLE

better than Aladdin's lamp!



with KWYKWAX, floors get-rich-quick without rubbing or polishing

High, hard and handsome—that's the kind of lustre Kwykwax dries to within 20 minutes. And *without* resort to "elbow grease" either. No rubbing . . . no polishing.

Rinsing or washing won't affect Kwykwax's durability. It effectively seals the floor . . . preserves it against the costly wear of continuous, everyday floor traffic . . . and is resistant to water tracked in on stormy days.

Wood, linoleum and composition floors all

take kindly to Kwykwax which is extremely easy to apply, won't burn and leaves no odor. And just wait till you see how large a floor area can be covered by merely one gallon of Kwykwax. You'll agree Kwykwax is the perfect answer to the question of lower floor maintenance costs.

West maintains a staff of over 350 trained representatives. Consult the nearest West Branch for your floor finish and maintenance problems.



WEST Co. Ltd.
DISINFECTING

Products That Promote Sanitation

MONTREAL, QUE., 5621-27 Casgrain Ave. • TORONTO, ONT., 2299 Dundas St. W.
CALGARY • EDMONTON • HALIFAX • REGINA • SASKATOON • VANCOUVER • WINNIPEG

CLEANSING DISINFECTANTS • INSECTICIDES • KOTEX VENDING MACHINES
PAPER TOWELS • AUTOMATIC DEODORIZING APPLIANCES • LIQUID SOAPS



KLIM simplifies infant feeding

Infant formulas can be prepared easily to meet infant feeding requirements by adding pure water and carbohydrate to Klim.

Klim is whole powdered milk from the finest cows. Just the water has been removed. And its advantages simplify so many problems.

Many doctors simulate fresh milk formulas by restoring Klim to normal strength. When the water is replaced, the solution has the same components of the highest quality fluid milk.

Klim, however, is easier for infants to digest than milk that has not been powdered. This results from the spray drying process which materially reduces the size of the large fat droplets of ordinary cow's milk.

Klim comes packed in vacuum tins. It requires no refrigeration in its powdered state. And it is ideal for the travelling baby or the baby away from home. It is readily liquefied, and can be fed to the infant immediately.

For professional information and feeding tables address: The Borden Company, Limited, Spadina Crescent, Toronto, 4, Ontario.

KLIM

First in preference the world over



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General Steel Wares, Limited, Toronto.
Kitchen Installations Ltd., Toronto.
Medalta Potteries Ltd., Calgary, Alta.
S. H. Newman Co., Ltd., Toronto.
Sully Foundry Division, Neptune Meters, Ltd., Long Branch, Ont.

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Armstrong Cork & Insulation Co. Ltd., Montreal.

CORN STARCH AND SYRUPS

Canada Starch Co., Ltd., Montreal.

COTS, FINGER, ETC.

Sterling Rubber Co., Ltd., Guelph, Ont.

COTS, METAL

Metal Craft Co., Ltd., Grimsby, Ont.
Metal Fabricators, Ltd., Tillsonburg, Ont.
Parkhill Bedding, Ltd., Winnipeg.
Simmons Limited, Montreal.

COTTON, ABSORBENT

See firms listed under "Absorbent Cotton".

COTTON BALLS

Bauer & Black, Division of the Kendall Co. (Canada) Ltd., Toronto.
Johnson & Johnson, Limited, Montreal.

CRAFTWORK SUPPLIES—OCCUPATIONAL THERAPY

Fellowcrafters Inc., Boston, Mass.
Lewis Craft Supplies Ltd., Toronto.

CRINOLINE

Johnson & Johnson, Limited, Montreal.

CROSS AGGLUTINATION VIBRATOR

Vendall Limited, Toronto.

CUBICLES

Capital Cubicle Co., Brooklyn, N.Y.
Dominion Metalware Industries Limited, Long Branch.
T. Eaton Co., Ltd., Toronto.
Metal Craft Co., Ltd., Grimsby, Ont.
Metal Fabricators, Ltd., Tillsonburg, Ont.
Westeel Products Ltd., Toronto.

CURTAIN AND BLANKET FINISHING EQUIPMENT

Canadian Laundry Machinery Co., Ltd., Toronto.
J. H. Connor & Son, Limited, Ottawa.

CUSTARD POWDERS

Gibbons Quickset Desserts, Toronto.
The Junket Folks, Chr. Hansen's Laboratory, Toronto.
J. H. Stafford Industries, Ltd., Toronto.

CUTLERY, TABLE

British & Colonial Trading Co., Ltd., Toronto.
Cassidy's Limited, Montreal.
General Steel Wares, Ltd., Toronto.
McGlashan-Clarke Co., Ltd., Niagara Falls, Ont.
S. H. Newman Co., Ltd., Toronto.

CUTTERS, BANDAGE AND GAUZE

W. J. Westaway, Ltd., Hamilton.

CYSTOSCOPES

American Cystoscope Makers, Inc., New York.

DIAPERS

Bauer & Black, Division of the Kendall Co. (Canada) Ltd., Toronto.

DAIRY PRODUCTS

Borden Co., Ltd., Toronto.



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IT'S YOUR MOVE

100% X-RAY EXAMINATION OF ALL HOSPITAL ADMISSIONS is the next forward move in the fight against T.B.

This Company, having originated and established the acknowledged standard for photofluorographic X-Ray examination, is in a favoured position to supply your requirements in this field.

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Public Health units, operating under the expense and inconvenience of obsolete 35 MM or 4" x 5" types can be readily converted to 70 MM.

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POWDERED STERILIZERS

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All our products are manufactured under strict laboratory control.

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DISINFECTANT — GERMICIDE

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Casgrain & Charbonneau, Ltée., Montreal.
Hanovia Chemical & Mfg. Co., Newark, N.J.
J. F. Hartz Co., Ltd., Toronto.
Ingram & Bell, Ltd., Toronto.
J. Stevens & Son Co., Ltd., Toronto.
Victor X-Ray Corp. of Canada, Ltd., Toronto.
Ferranti Electric Ltd., Mount Dennis, Ont.

DENTAL INSTRUMENT REPAIRS

Condor Mfg. Co., Toronto.

DEODORANTS

Dustbane Products, Ltd., Ottawa, Ont.
Filter Kleen Products, Toronto.
Huntington Laboratories of Canada, Ltd., Toronto.
Oakite Products of Canada, Ltd., Toronto.
West Disinfecting Co., Ltd., Montreal.
G. H. Wood & Co., Ltd., Toronto.

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Dominion Metalware Industries Limited, Long Branch.
Metal Craft Co., Ltd., Grimsby, Ont.
Metal Fabricators Ltd., Tillsonburg, Ont.
Simmons Limited, Montreal.

Office, Wood or Steel

Office Specialty Mfg. Co., Ltd., Newmarket Ont.

DESSERTS

Gibbons Quickset Desserts, Toronto.

DEXTROSOL

Canada Starch Co., Ltd., Montreal.
The Junket Folks, Chr. Hansen's Laboratory, Toronto.
J. H. Stafford Industries Ltd., Toronto.

DIATHERMY APPARATUS

American Cystoscope Makers, Inc., New York.
American Diathermy Productions, Los Angeles.
Burke Electric & X-Ray Co., Ltd., Toronto.
Casgrain & Charbonneau, Ltée., Montreal.
Ferranti Electric Ltd., Mt. Dennis, Ont.
J. Stevens & Son Co., Ltd., Toronto.
Victor X-Ray Corporation of Canada Ltd., Montreal.
X-Ray & Radium Industries, Limited, Toronto.

DIAGNOSTIC EQUIPMENT

Surgical Supplies (Canada) Ltd., Toronto.

DISHES, OVENWARE, TEAPOTS

Medalta Potteries Ltd., Calgary, Alta.

DISHWASHING COMPOUNDS

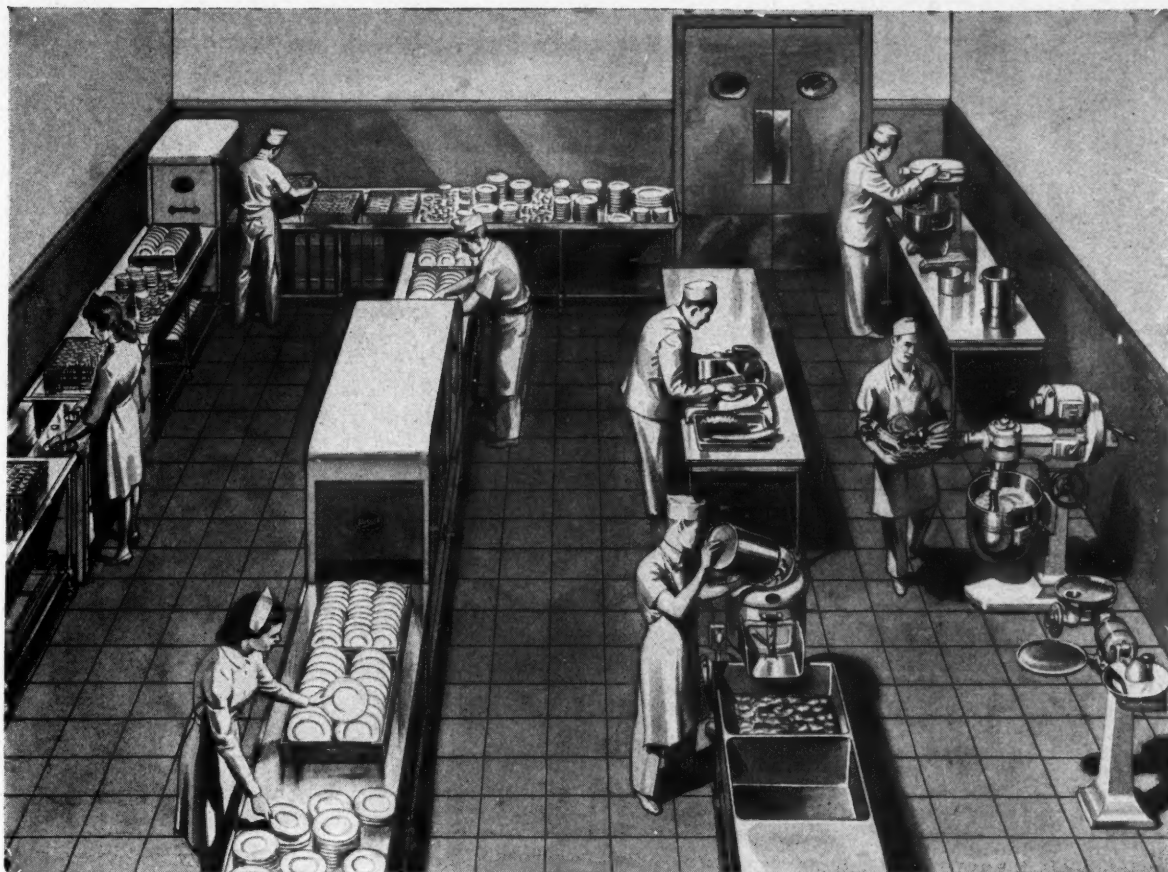
Colgate-Palmolive-Peet Co., Ltd., Toronto.
Dustbane Products, Ltd., Ottawa.
Filter Kleen Products, Toronto.
Huntington Laboratories of Canada, Ltd., Toronto.
McKague Chemical Co., Toronto.
Oakite Products of Canada, Ltd., Toronto.

DISHWASHING MACHINES

G. S. Blakeslee & Co., Ltd., Toronto.
Filter Kleen Products, Toronto.
General Steel Wares, Ltd., Toronto.
Hobart Mfg. Co., Ltd., Toronto.
S. H. Newman Co., Ltd., Toronto.
Wrought Iron Range Co., Ltd., Toronto.

DISINFECTANTS

Allen & Hanburys Co., Ltd., Lindsay, Ont.
Bard-Parker Co., Inc., Danbury, Conn.
Canadian Germicide Co. Limited, Toronto.
Dustbane Products, Ltd., Ottawa.
Huntington Laboratories of Canada, Ltd., Toronto.
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New opportunities for economy present themselves daily in a Hobart equipped kitchen. Pound for pound, food goes farther, for you can make use of much that is ordinarily wasted. With Hobart mechanized efficiency, routines are speeded up, for every kitchen operator knows that peeling, mixing, slicing,

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Now is the time to give thought to improvements in service and in reducing costs. Hobart maintains sales and service representatives in all principal Canadian centres, ready at all times to give assistance to kitchen operators.

SHOWN ABOVE ARE:

HOBART DISHWASHERS that increase speed and sanitation of dishwashing—reduce operating expense—eliminate chipping and marking—give you clean, sparkling china, glassware and silverware.

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ALL HOBART FOOD MACHINES are made in a wide range of sizes and with every needed attachment.

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The World's Largest Manufacturer of Food Preparing Machines
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TRADE MARK REG. CANADA PAT. OFF.

*... the renewable fabric finish that
resists dirt ... soil ... and moisture!*

Uniforms stay crisper, cleaner-looking longer ... wash more easily ... when they are protected with Johnson's DRAX! And both these advantages mean a cutting down of laundering costs!

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DRAX is grand for curtains, tablecloths, place mats and other washable things, too. It saves so much time in the washing ... so much wear ... and keeps things looking cleaner longer, it's well worth looking into. Find out about DRAX today!

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Brantford, Canada

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Ontario Chemicals Ltd., Toronto.
West Disinfecting Co., Ltd., Montreal.

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American Sterilizer Co., Erie, Pa.
Canadian Laundry Machinery Co., Ltd., Toronto.

DISPENSERS

Liquid Soap

Canadian Germicide Co. Limited, Toronto.
Dustbane Products, Ltd., Ottawa.
Huntington Laboratories of Canada, Ltd., Toronto.
Hygiene Products, Ltd., Montreal.
West Disinfecting Co., Ltd., Montreal.
G. H. Wood & Co., Ltd., Toronto.

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Clay-Adams Co., Inc., New York, N.Y.

DRAINAGE TUBING

Clay-Adams Co., Inc., New York.
Hygiene Products, Ltd., Toronto.
Sterling Rubber Co., Ltd., Guelph, Ont.
Viceroy Mfg. Co., Ltd., Toronto.

DRAX LAUNDERING FINISH

S. C. Johnson & Son, Ltd., Brantford, Ont.

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Surgical Supplies (Canada) Ltd., Toronto.

DRESSINGS, PADS and ROLLS

Johnson & Johnson, Limited, Montreal.

DRESSINGS, PETROLEUM JELLY GAUZE

Smith & Nephew, Ltd., Montreal.

DRESSINGS, SURGICAL

Bauer & Black Division of the Kendall Co. (Canada) Ltd., Leaside, Ont.
Casgrain & Charbonneau, Ltée., Montreal.
J. F. Hartz Co., Ltd., Toronto.
Ingram & Bell, Ltd., Toronto.
Johnson & Johnson, Ltd., Montreal, Que.
Smith & Nephew, Ltd., Montreal.
J. Stevens & Son Co., Ltd., Toronto.

DRUGS, CHEMICALS

See firms listed under "Pharmaceuticals".

DRUG SUNDRIES, RUBBER

Barringham Rubber Co., Ltd., Oakville, Ont.
Clay-Adams Co., Inc., New York.
Sterling Rubber Co., Ltd., Guelph, Ont.
J. Stevens & Son Co., Ltd., Toronto.
Viceroy Mfg. Co., Ltd., Toronto.

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Turnbull Elevator Co. Ltd., Toronto.

ELECTRICAL MAINTENANCE SUPPLIES

Northern Electric Co., Ltd., Montreal.

ELASTIC ADHESIVE BANDAGES, PLASTERS AND DRESSINGS

Smith & Nephew, Ltd., Montreal.

ELECTRIC HEATING and COOKING APPLIANCES

Moffats, Limited, Weston, Ont.
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ELECTROCARDIOGRAPHS

Sanborn Co., Cambridge, Mass.

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Resident Surgeon: *"That's the slickest thyroidectomy I've seen done in this O.R. . . . With all the tricky suture work, there wasn't a single break."*

Instrument Nurse: *"Well, doctor, there's a good reason for that . . . Dr. Williams always uses Ethicon.*"*

*Ethicon Tru-Gauged Sutures have 25% more strength-uniformity than hand-polished gut. For further information, write to Suture Division, Johnson & Johnson Limited, Montreal.

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Philips Industries, Ltd., Montreal.
Victor X-Ray Corp. of Canada, Ltd., Montreal.
X-Ray & Radium Industries, Limited, Toronto.

ELEVATORS

Turnbull Elevator Co. Ltd., Toronto.

ENAMELS

Glidden Co. Ltd., Toronto.
Murphy Paint Co. Ltd., Montreal.
Sherwin-Williams Co. of Canada Ltd., Montreal.

ENAMELWARE, SURGICAL

General Steel Works, Ltd., Toronto.
Ingram & Bell, Ltd., Toronto.
J. Stevens & Son Co., Ltd., Toronto.
Surgical Supplies (Canada) Ltd., Toronto.
Hygiene Products Ltd., Toronto.

ENVELOPES

W. J. Gage & Co., Ltd., Toronto.

ETHER

Duncan Flockhart & Co., London, Eng.
Mallinckrodt Chemical Works Ltd., Montreal.
Merck & Co., Ltd., Montreal.
E. R. Squibb & Sons of Canada, Ltd., Toronto.

EXTRACTS AND FLAVOURS

Gibbons Quickset Desserts, Toronto.

FEATHER STERILIZING EQUIPMENT

Canadian Laundry Machinery Co. Ltd., Toronto.

FILING SYSTEMS and RECORDS

Office Specialty Mfg. Co., Ltd., Newmarket, Ont.

FILTERS, CERAMIC

Combustion Engineering Corp., Ltd., Montreal.
Crane, Limited, Montreal.

FILTER PAPER, COFFEE

A. Guinness & Co., Toronto.

FILTERS, WATER

W. J. Westaway Co., Ltd., Hamilton, Ont.

FIRE ALARM SYSTEMS

Edwards & Co. of Canada, Ltd., Montreal.
Northern Electric Co. Ltd., Montreal.

FIRE DOORS

Westeel Products, Ltd., Toronto.

FIRE ESCAPES, SLIDE

Westeel Products, Ltd., Toronto.

FIRE EXTINGUISHERS

Pyrene Mfg. Co. of Canada Ltd., Toronto.
C.O. Two Fire Equipment Co. of Canada Ltd., Toronto.

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Curtis Lighting of Canada, Ltd., Toronto.
Northern Electric Co., Ltd., Montreal.

FLAKED ICE MACHINES

Canadian Ice Machine Co., Ltd., Toronto.

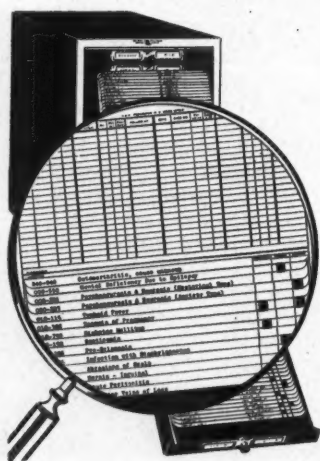
FLATWARE, SILVER

British & Colonial Trading Co., Ltd., Toronto.
McGlashan-Clarke Co., Ltd., Niagara Falls, Ont.

FLOOR GLIDES

Armstrong Cork & Insulation Co., Ltd., Montreal.
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Viceroy Mfg. Co., Ltd., Toronto.

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THE sole responsibility and purpose of a hospital—that of saving and preserving human life and health is dependent largely, in its effective accomplishment, on accurate, logically classified and quickly accessible records. The outcome of an operation or form of treatment is successful not by reason only of the surgeon's skill—but of the knowledge gained from past experience and observations accurately recorded by the hospital.

"Office Specialty" Hospital Records include forms for tabulating case histories, systems of recording based on the Standard Classified Nomenclature of Diseases recommended by leading medical and hospital organizations, and forms for filing material and data from the Laboratory, X-ray Department, and Business Office.

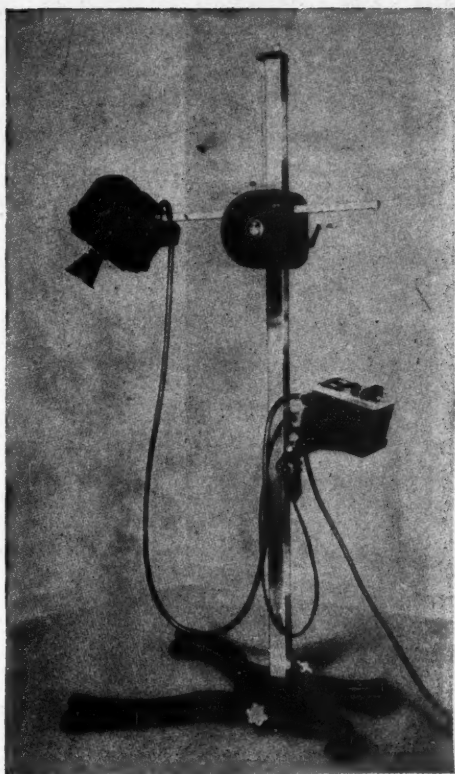
"Office Specialty" Hospital Record Service is complete—from efficient record forms to the proper equipment to house, protect and systematically classify records, X-ray films and informative data.

Your request for complete information will have our prompt and cheerful attention.

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Compact • Light Weight • Ample Capacity

KELEKET

X-RAY EQUIPMENT

A Complete Line

◀ KELEKET MOBILE PORTABLE X-RAY UNIT

Obtainable in two styles . . . table-type tubestand or mobile tubestand illustrated. Both provide many advantages of more expensive, full scale equipment. Complete range of positions, vertically and horizontally for radiography or fluoroscopy. Both tubestand give complete flexibility for the office or hospital . . . diagnosis can be confirmed right in the office or at the patient's bedside.

K-30 DE LUXE VERTICAL FLUOROSCOPE ▶

Design improvements such as elimination of the protruding carriage arm make savings of one third in floor space. The screen is universally adjustable, giving unusual freedom of movement. The Patterson High Intensity Type B Screen is 12" x 16" and has 14" transverse travel, and accommodates the Keleket Outhodiagraphic attachment. Floor space required is 40" x 48". Height of cabinet, 76".



X-56

Illustrated descriptive literature sent on request. Address correspondence to

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MONTREAL, QUE.

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WINNIPEG, MAN.

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CALGARY, ALTA.

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EDMONTON, ALTA.



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Will they wear out prematurely, or last indefinitely? Keep them permanently shining and beautiful with regular applications of Johnson's heavy-duty wax polish. It costs little, helps prevent expensive repairs and replacements, simplifies cleaning. Two types:



1. Johnson's TRAFFIC WAX. A tough, wear-resisting buffing wax. Prevents dirt from penetrating the surface, repels stains and moisture. Polishes to a rich lustre. For wood or linoleum floors—also furniture and woodwork. In paste or liquid form.



2. Johnson's NO-BUFF Floor Finish (green label). An easy-to-use, economical treatment for large floor areas. Self-polishing—no rubbing or buffing. Dries to a gleaming finish that protects against wear. For wood, linoleum, rubber, asphalt tile, terrazzo, etc. Brown Label NO-BUFF has an extra water-resistant property.

Have you tried Johnson's Paints?

Before you do any painting, find out how well Johnson's complete line of paints can fill your needs. Highest quality guaranteed. Made by the makers of Johnson's Wax.



JOHNSON'S WAX POLISHES AND PAINTS

S. C. JOHNSON & SON LTD., BRANTFORD, CANADA

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Holt Mfg. Co., Oakland, Cal.
G. H. Wood & Co., Ltd., Toronto.

FLOORING, ASPHALT TILE

Armstrong Cork & Insulation Co., Ltd., Montreal.
Canadian Johns-Manville Co., Ltd., Toronto.

FLOORING, PLASTIC

Arnold Banfield & Co., Ltd., Toronto.

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Dunlop Tire & Rubber Goods Co., Ltd., Toronto.

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Glidden Co. Ltd., Toronto.
Huntington Laboratories of Canada, Ltd., Toronto.
Hygiene Products, Ltd., Toronto.
S. C. Johnson & Son, Ltd., Brantford, Ont.
Ontario Chemicals Ltd., Toronto.
Reckitt & Colman (Canada) Ltd., Montreal.
Sherwin-Williams Co. of Canada Ltd., Montreal.
West Disinfecting Co., Ltd., Montreal.
G. H. Wood & Co., Ltd., Toronto.

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Hobbs Glass, Ltd., London, Ont.

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Master Surgical Instrument Co., Irvington, N.J.

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Franklin C. Hollister Co., Chicago, Ill.

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Juice Industries, Inc., Dunedin, Florida.
Gibbons Quickset Desserts, Toronto.
J. H. Stafford Industries, Ltd., Toronto.

FUMIGANTS

Against Clothes Moths

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Merck & Co., Ltd., Montreal.
G. H. Wood & Co., Ltd., Toronto.

FURNACES

Combustion Engineering Corp., Ltd., Montreal.
General Steel Wares Ltd., Toronto.

FURNITURE

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Office Specialty Mfg. Co., Ltd., Newmarket, Ont.

FURNITURE POLISH

Glidden Co., Ltd., Toronto.

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Dominion Metalware Industries Limited, Long Branch.
T. Eaton Co., Ltd., Toronto.
Metal Craft Co., Ltd., Grimsby, Ont.
Metal Fabricators Ltd., Tillsonburg, Ont.
Parkhill Bedding, Ltd., Winnipeg.
Scanlan-Morris Co., Madison, Wis.
Robert Simpson Co. Limited, Toronto.
Simmons Limited, Montreal.
Surgical Supplies (Canada) Ltd., Toronto.

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Cassidy's Limited, Montreal.
J. Lorne Davidson, Toronto.
T. Eaton Co., Ltd., Toronto.
Robert Simpson Co. Ltd., Toronto.

GARBAGE REFRIGERATION

Frigidaire Products of Canada, Ltd., Toronto.

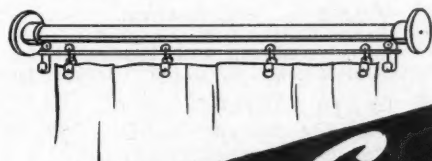


—installed with minimum inconvenience to Hospital routine

It's a distressing and familiar scene in Canadian Hospitals today . . . Public wards overcrowded . . . post-operative patients placed next to convalescing patients . . . old-fashioned screens consuming valuable floor space in vain efforts to provide privacy to the one patient and peace of mind to the others . . . **Empire Cubicle Equipment** changes all that!

Heavy cloth curtains fold flat against the wall when not needed. No useful space is taken up. They're standing by—waiting and ready for immediate use. A gentle pull by a nurse or attendant and the curtains run quietly around their track. They form a solid, encompassing wall.

In seconds, the patient enjoys new-found privacy; and hospital routine can be carried out with added speed, efficiency and care . . . A **practical** answer to the acute shortage of hospital wards! Yes, here is the practical answer to this vital need!



Surgical Supplies
(CANADA) LIMITED

Note these All- Important Features

The system designed to form a smooth-flowing, inconspicuous unit . . . Track and tube one integral unit, with minimum of dust-collecting surface . . . Track non-rusting Cadmium Plated . . . Fibre runners roll quietly and easily around corners . . . Runners cannot be accidentally detached from the track . . . Curtains may be easily removed for laundering . . . The system may be finished in any desired color to match room furnishings . . . Installation may be made by your own Engineer, thereby effecting further reduction in cost . . . Prompt delivery.

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The Best Materials That
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*Specialists in
Surgeons' Gloves
for over 34 Years.*



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Hospitals of Any Size
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Special cards, one or a dozen or more made to
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several color combinations; ask for quotations.

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J. H. Stafford Industries, Ltd., Toronto.

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Filter Kleen Products, Toronto.

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GLASSWARE

British & Colonial Trading Co., Ltd., Toronto.
Cassidy's Limited, Montreal.
J. Stevens & Son Co., Ltd., Toronto.

GLASSWARE, SURGICAL

Canadian Laboratory Supplies Ltd., Toronto.
Central Scientific Co. of Canada, Ltd., Toronto.
Clay-Adams Co., Inc., New York.
Cassidy's Limited, Montreal.
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Hobbs Glass, Ltd., London, Ont.

GLASS, TEMPERED, SAFETY

Hobbs Glass, Ltd., London, Ont.

GLASS, BLOCKS, INSULATING, STRUCTURAL

Hobbs Glass, Ltd., London, Ont.

GLIDES, FURNITURE, BEDS, ETC.

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Metal Craft Co., Ltd., Grimsby, Ont.
Stewart-Warner-Alemite Corp. of Canada, Ltd., (Bassick
Division) Belleville, Ont.
Viceroy Mfg. Co. Ltd., Toronto.

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J. Stevens & Son Co., Ltd., Toronto.

GLYCERINE

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CorDest Garments, Ltd., London, Ont.
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GRADUATION DIPLOMAS

Franklin C. Hollister Co., Chicago, Ill.

GRAPEFRUIT JUICE CONCENTRATE

Juice Industries, Inc., Dunedin, Florida.

HANDICRAFT SUPPLIES—OCCUPATIONAL THERAPY

Fellowcrafters Inc., Boston, Mass.
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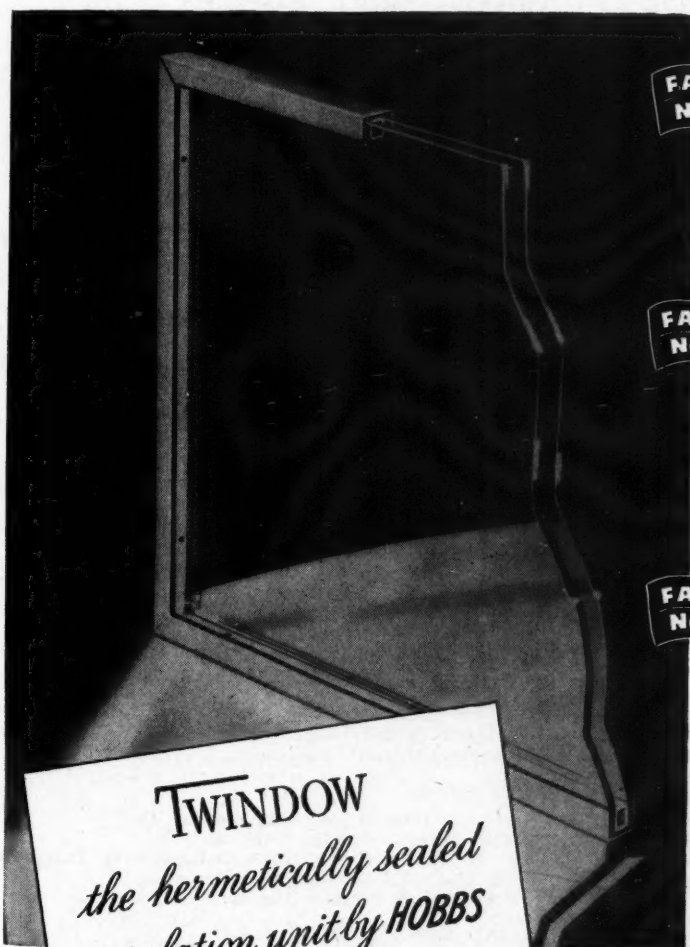
HARDWARE, BUILDERS

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*the hermetically sealed
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BRANCHES COAST TO COAST . . . there's one near you!

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Twindow is the newest development in insulating windows

It consists of two or more panes of glass separated by hermetically sealed air spaces, and enclosed in a protecting frame of stainless steel. It is the result of years of research to create an economical multiple window unit, combining maximum transparency with built-in permanent insulation.

FACT, No. 2

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Twindow with two panes of glass has more than twice the insulating efficiency of ordinary windows. With three or more panes, the insulating efficiency is still further increased. This saves money by reducing the load on heating and air-conditioning equipment. It not only saves fuel . . . it makes practical more and larger windows so that rooms can be flooded with natural daylight. More use of daylight will cut lighting bills.

FACT, No. 3

Twindow makes any building more comfortable and more healthful

Because of the superior insulating properties of Twindow, it helps to maintain proper temperature and humidity levels. It virtually does away with downdrafts near windows.

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Twindow is designed to prevent fogging or condensation on the glass

Except under extreme conditions, its sealed-in air space assures clear windows in any climate. This makes Twindow a 'must' wherever clear vision is important . . . picture windows for homes, store front display windows, large windows in office buildings, factories and institutions.

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It is a one-piece window unit, completely prefabricated.

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DUNHAM Differential Heating maintains comfort-level temperature.

In buildings where different heat comfort-levels must be maintained day and night, Dunham Differential Heating demonstrates one of its most outstanding benefits.

Dunham Differential Heating utilizes "Flexible Steam" to meet this exacting heating requirement. It is the only medium which continuously supplies heat comfort. The overheating or underheating which arise from "on and off", cycling or pulsating heat supply are eliminated.

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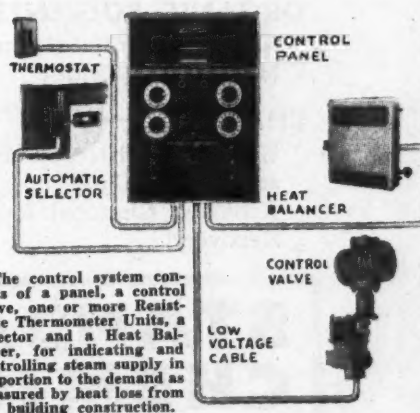
If you are responsible for the installation of a new heating system or changeover of an existing one, you'll be interested in the full Dunham Differential Heating history. Contact your nearest office. C. A. Dunham Co. Ltd., 1523 Davenport Rd., Toronto 4, Ontario. Offices from coast to coast.

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The owner of a Dunham System is protected against the annoyances and expense caused by the divided responsibility in an "assembled" system of devices built by different manufacturers.

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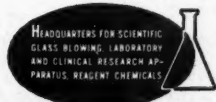
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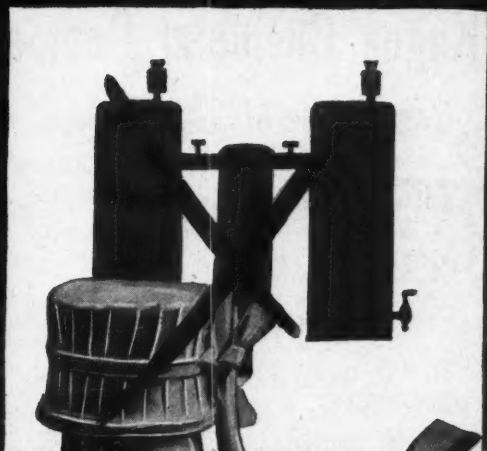


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Gratification because the recent period of short supply has demonstrated two important factors in our relations with our customers. Firstly, we appreciate the forbearance and sympathetic understanding of McKemco users when we were unable to meet all their requirements. Secondly, we are proud that throughout the entire period of short supply every regular user of McKemco products was provided with at least sufficient material to keep his plant in operation.

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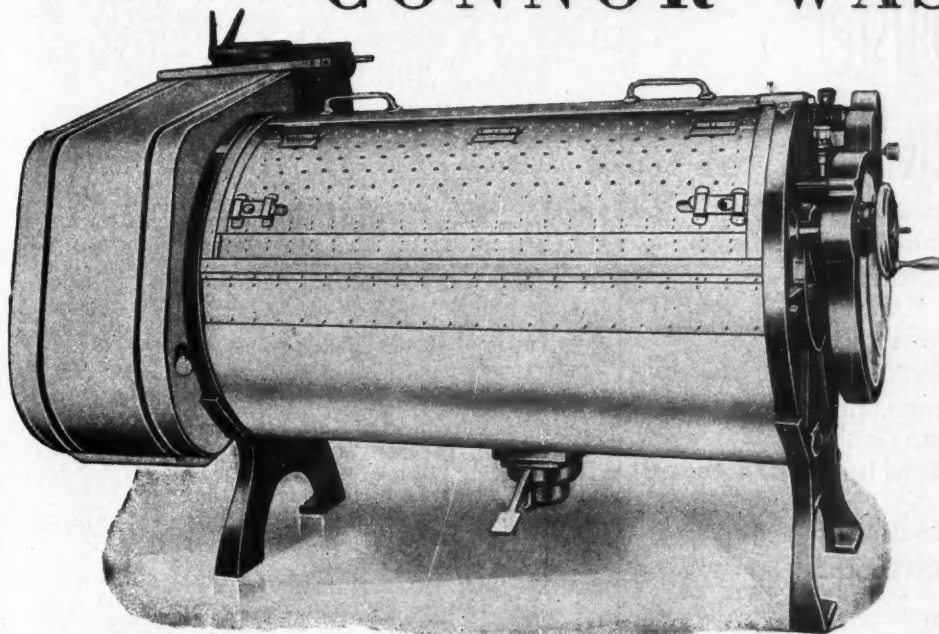
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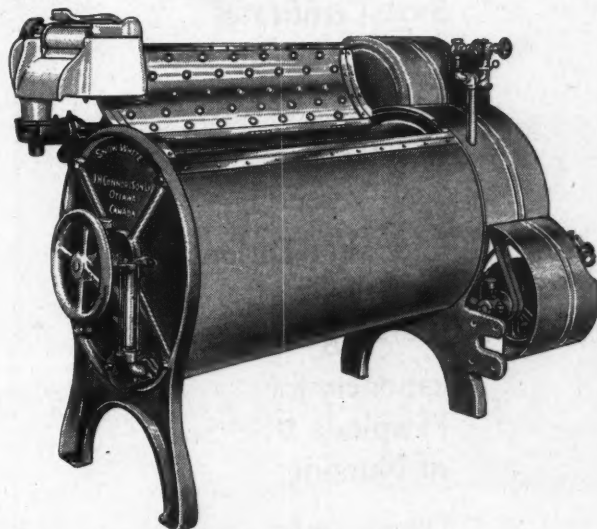
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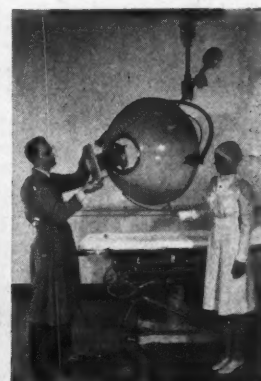
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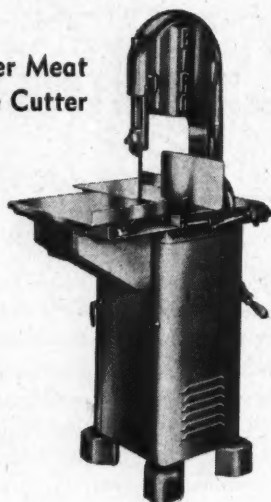
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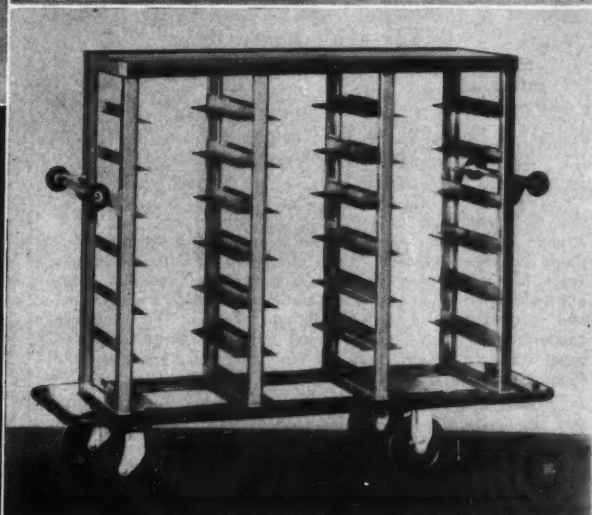
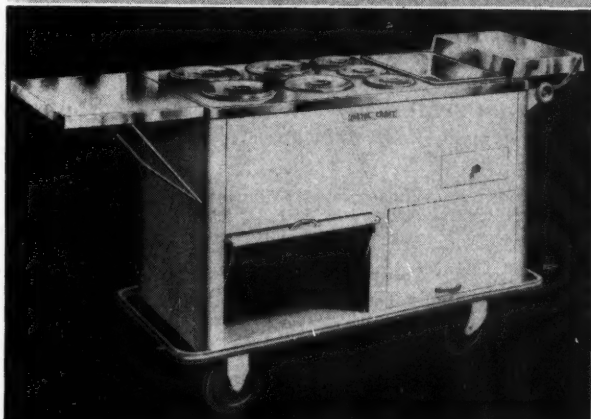
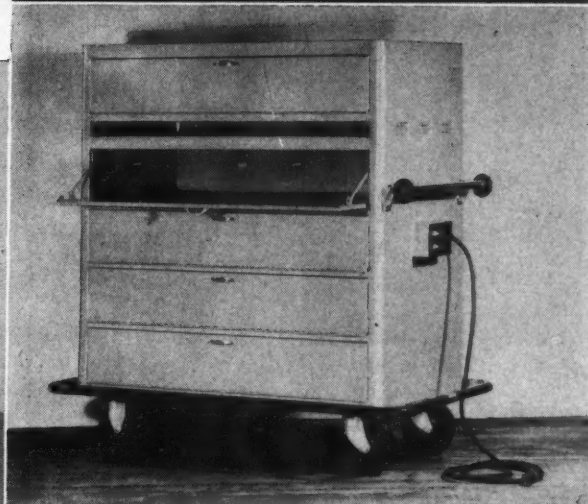
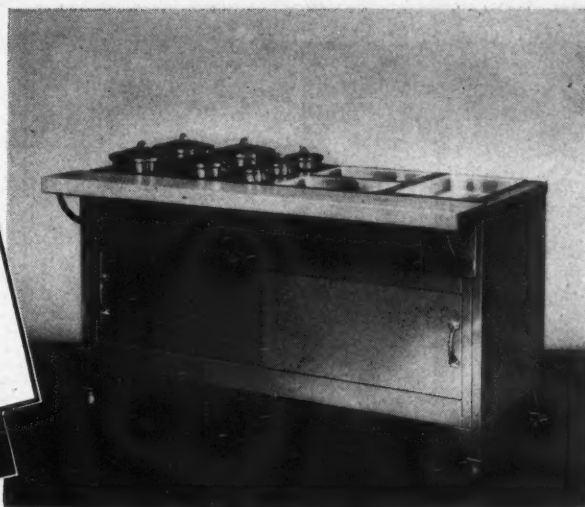
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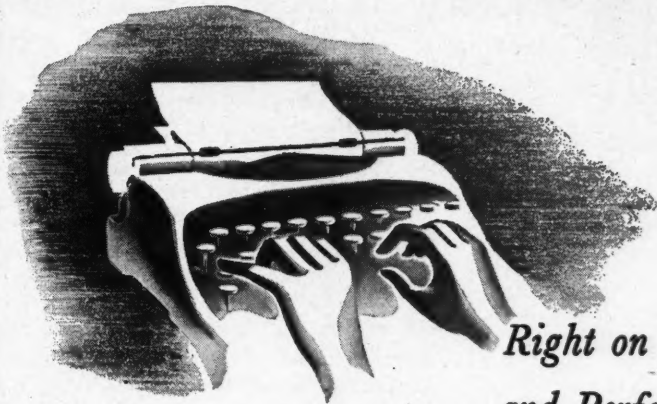
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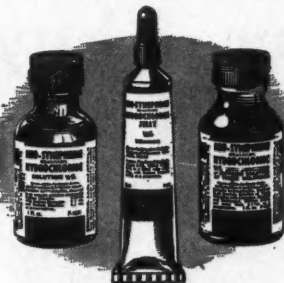
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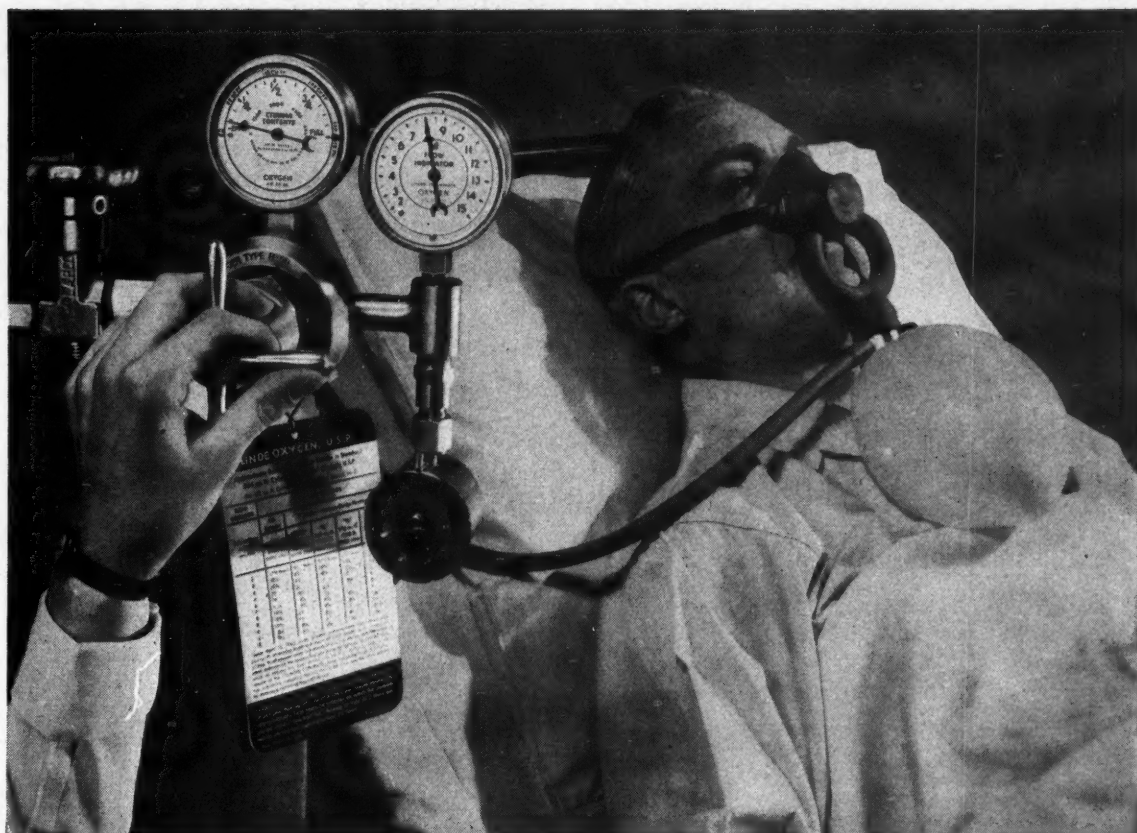
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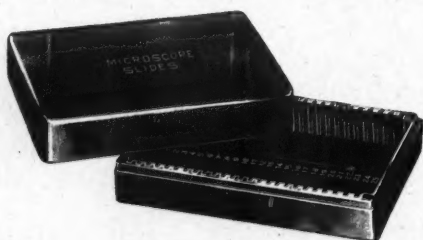


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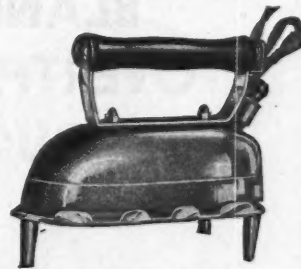


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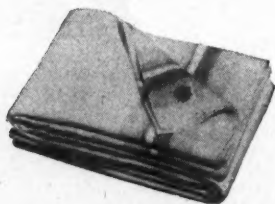
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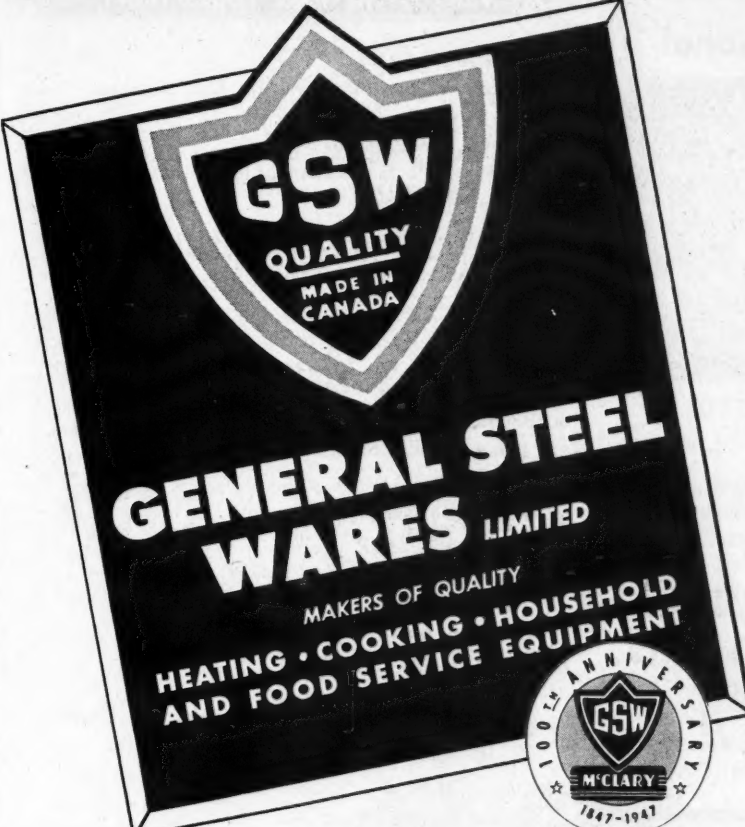
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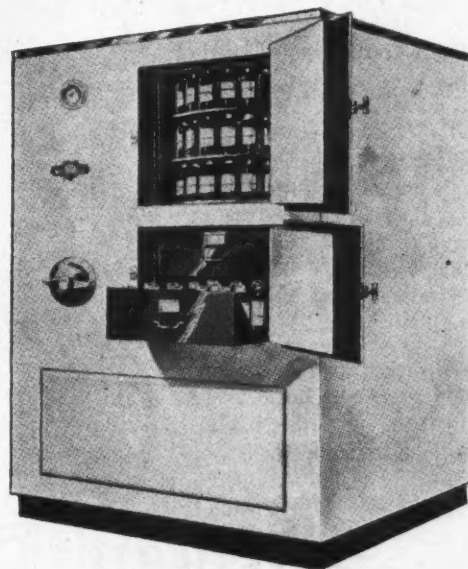
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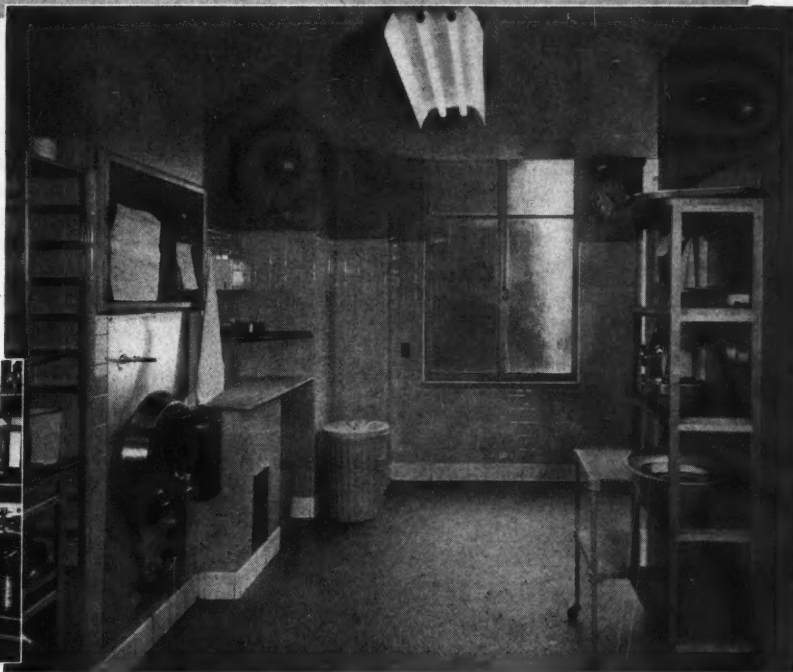
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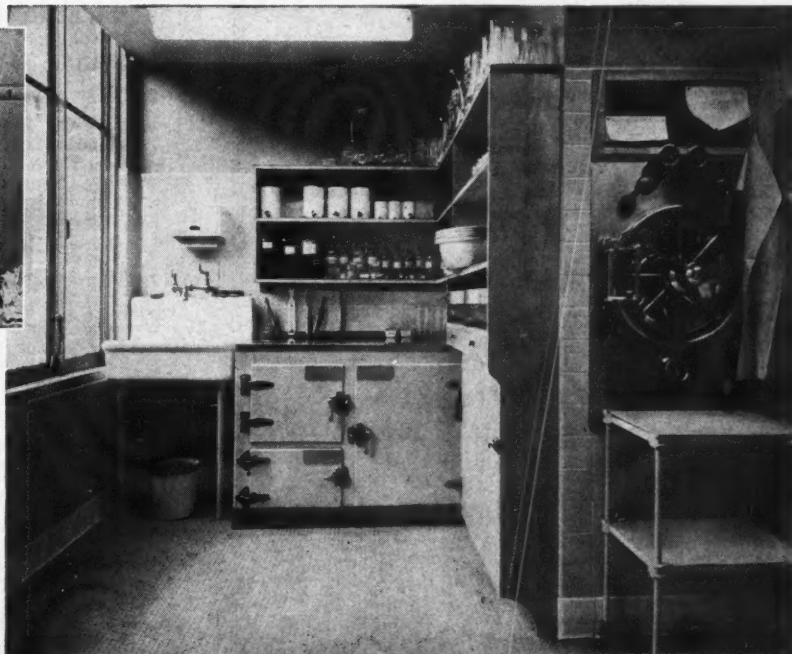
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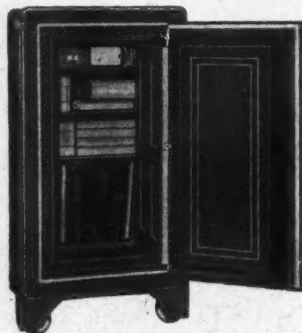
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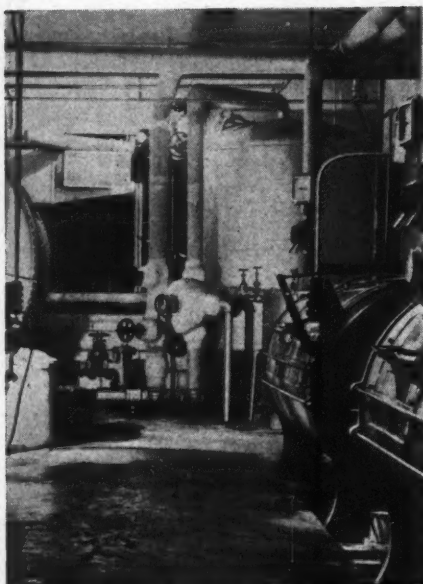
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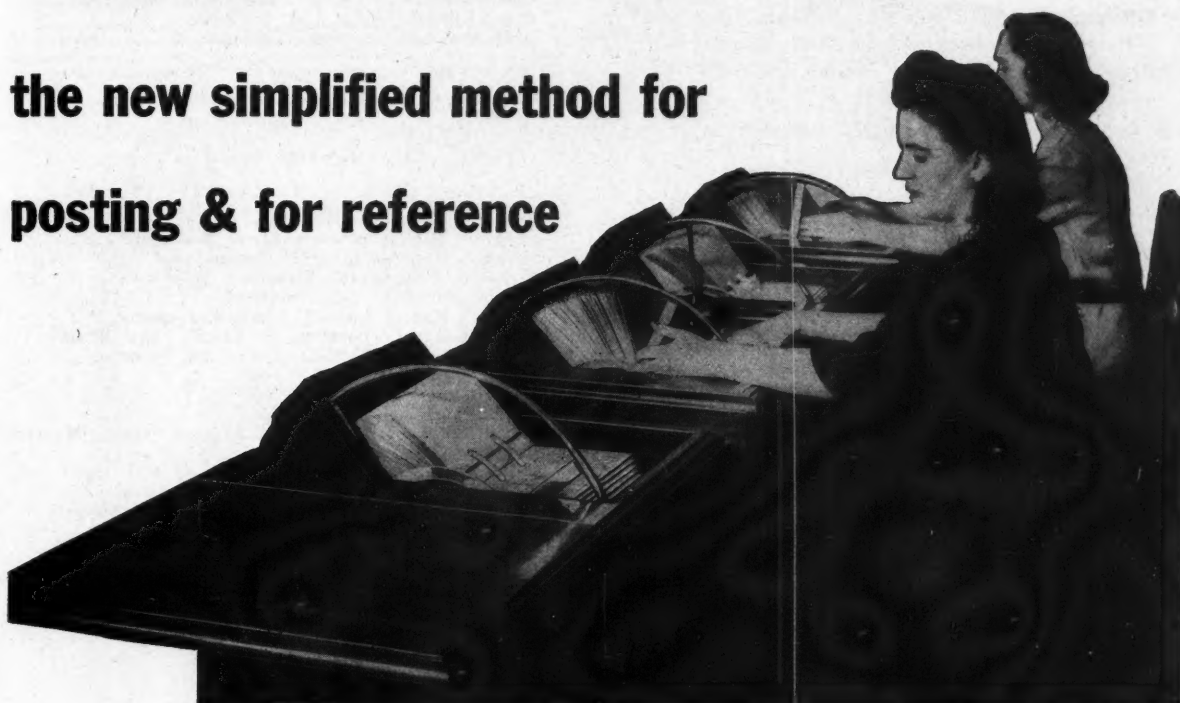
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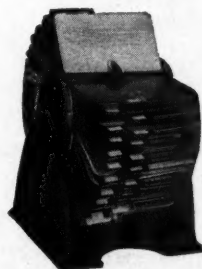
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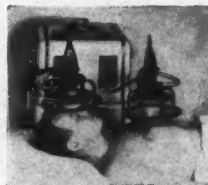
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